



THE HIGHLAND COMMUNITY WASTE PARTNERSHIP

COMPOSTING

An introduction to composting.
Making (by cold composting)
and using compost from your
WASTE to your GARDEN



The Highland Community Waste Partnership

WHY COMPOST?

Food waste makes up approximately 40% of the average household bin. Every time food waste goes to landfill it breaks down anaerobically (without oxygen) and produces methane. This is bad news for climate change as methane is 20 times worse than CO₂.



By far the best step to reduce food waste is to make less waste - i.e. use more of what we have.

But what about the unavoidable food waste like banana peels, teabags and potato peelings? That's where composting comes in!



Composting is a natural way of recycling organic material such as food waste and garden clippings and reduces the amount of waste sent to landfill. When food waste is sent to landfill it will break down anaerobically (without oxygen) which creates methane. However, when this same waste is composted above ground at home, oxygen helps the waste to decompose aerobically which means much less methane is produced which is good news for the planet!



Composting breaks down organic matter into nutrients our plants can use. This process happens around us in the natural world, so remember that whatever you do your food waste will rot down in your compost bin. A few tips will make sure this process is swift and smell-free!

In composting our kitchen scraps we can lower our carbon footprint and end up with free, high quality compost that works magic in our gardens!

COMPOSTING BASICS

Home made compost can be better than shop-bought as its ingredients are natural and cannot be washed out of the soil like synthetic nutrients. It is also full of active soil life. These bacteria and fungi actually work with your plants to keep them healthier, stronger and more resistant to diseases.



Making compost is a bit like baking, in that a recipe makes all the difference! For our compost to work best, you want to have a mixture of 'green' and 'brown' ingredients, along with the right amount of water and air. This mixture gives the perfect conditions for all of the soil microbes that are the ones actually breaking down our materials into compost. If these bacteria, fungi and minibeasts have a happy home in our compost bin, the composting process will go quickly and pleasantly.

- GREENS: tend to be soft and wet, they contain nitrogen and are quick to rot.
- BROWNS: tend to be tough and dry, they contain carbon and are slower to rot.



Please see the table overleaf (adapted from Recycle for Scotland) and see what can and cannot be composted from your house and garden. Ideally the mixture of 'greens' and 'browns' should be 50/50 by weight. The right mixture of dry, absorbent materials and wet materials help keep the compost pile at the right level of moisture and prevents unpleasant smells.

GREENS, BROWNS AND DON'T'S

GREENS

- Fruit and vegetable peelings
- Tea bags & coffee grinds
- Grass clippings
- Plant trimmings
- Hedge clippings
- Old flowers & bedding plants
- Soft pruning's & plant debris
- Annual weeds (before seeds set)
- Manure from vegetarian animals (NO dog or cat)



You'll notice that some of these ingredients don't look green! What they have in common is a high level of nitrogen. This is one of the key nutrients that plants need, so makes a nice rich compost. When nitrogen-rich things decompose, they smell! Adding browns is important to 'lock in' this nitrogen and prevent bad smells and a slimy, slow, compost bin.



BROWNS

- Paper & cardboard (torn or shredded)
- Egg shells & boxes
- Hair, fur & wool
- Sweetcorn cobs
- Wood ash (not coal ash)
- Autumn leaves & straw
- Vacuum cleaner contents
- Twigs/pine needles
- Pure wool or cotton rags



These materials are high in carbon. They provide structure to the compost, allowing air in and also soak up the water that is released from the green ingredients.

DON'T

- No fats
- No meat or fish
- No cooked vegetables
- No dairy products
- No glassy magazines
- No plastic, metal or glass
- No dog droppings or cat litter

DIFFERENT COMPOST SYSTEMS



Wormery:

a container stocked with special worms. They eat your food scraps and poo out compost

Hot pile:

a large (1 metre squared at least) compost pile built all in one go of well mixed greens and browns. Turned several times.



Cold Composting:

a contained compost pile that is added to whenever ingredients are available.



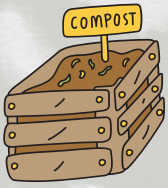
Make your own!

There are endless ways to make your own compost bin, so feel free to get creative! You can use left over pallets, old logs or even some wire mesh to hold together your compost. The key things to remember are to place it in a sunny spot on bare soil, allow for gaps to let air go through and a structure to protect it from wind and potentially vermin.

Choosing your compost bin / type

Type	Advantages	Disadvantages
Wormery:	<ul style="list-style-type: none"> • Small & compact • Relatively fast • Fun 	<ul style="list-style-type: none"> • Expensive to buy but can DIY • Worms need care and regular small amounts. • Can't freeze - needs a sheltered spot
Hot Pile	<ul style="list-style-type: none"> • Can get over 70 degrees Centigrade killing weed seeds • Very fast - ready in a few weeks • Makes a large batch of compost 	<ul style="list-style-type: none"> • Effort and time needed to source materials and to ensure the correct mix • The whole pile needs turning regularly
Cold Composting	<ul style="list-style-type: none"> • Easy / lazy - doesn't need a lot of attention • Can add lots or little amounts as you have them • Easy to remedy any problems that arise 	<ul style="list-style-type: none"> • Slow • Weed seeds not killed - this may mean more weeding when yours is applied to your garden

This guide provides information about cold composting.



How do I compost?

Just follow these simple steps to get started:

1 - Set up your bin

The ideal spot for your bin should be sunny and on bare (loosened) soil, the heat speeds up the decomposition and the soil allows worms to come in and water to drain. It's a good idea to site it in a place that is easy to get to as you will probably be visiting it daily.

Leave a 20cm gap between the bin and any plants or walls.

If you can't put your bin on bare soil, you can make a raised bed and fill it with soil on a concrete or pebble base.



2 - Start filling your bin

Gather together some composting materials: grass cuttings, branches, dead plants, paper, cardboard and kitchen waste. Use a mix of **green/soft** and **brown/tough**. Put these in your bin to create the base.

3 - Everyday composting

Put your kitchen food waste into a sturdy container and empty it into the compost bin when full. Aim for a mix of greens and browns, so whenever you empty your container you could tear up some cardboard of similar weight to put in with it. Putting a brown layer on top also discourages flies.

4 - Mix your compost

To start with, mix the content weekly with a broom handle or fork to help your compost break down. It can be a lot of effort though, but even an occasional twisting action with a garden fork from the top of the bin can really help! Once your compost matures you can do it less frequently. This is also a good way to eliminate odours.



5 - Full compost bin?

If your compost bin is full, well done! You can now let it do its magic and mature (still mix occasionally). You'll know it's ready when it is dark, rich colour and crumbles easily.

6 - Set up a new compost heap

You can keep composting while you are waiting for your first heap to mature. Just set up a new heap, there are some suggestions on how to make your own on page 5 and some links on page 11!

7 - Using your finished compost

Once your compost is ready (after about 12 months), you can either remove the lower layers to use in your garden or take the entire bin off to use it all. If parts of your compost are not quite ready, just re-mix it and put it back in.

Use the finished compost to grow flowers or vegetables, you can mix in the compost (to 15 to 20cm deep) or apply it as a surface mulch. Note: home compost may be too 'strong' (nitrogen rich) for planting seeds if you don't mix it.

See next page for more hints and tips for using your compost.

KEY POINTS AND TIPS

1. Use equal amounts of greens and browns
2. Shredding / chopping speeds up the decomposition
3. Turn or mix regularly to aerate the heap
4. Keep the heap as moist as a damp sponge
5. Avoid adding too many autumn leaves as they decompose very slowly. Make a separate heap for leaves.

Using Your Compost

When your compost is a dark, rich colour and crumbles easily it is ready to use. You can use your compost just like you would any store bought compost, although it might be a bit rougher than you are used to. Mix it with soil or sharp sand to create a good potting soil.

Here are a few other uses for your homemade compost:

Compost tea or liquid fertiliser:

To do this put some of your compost into a hessian / cotton bag and soak it in a bucket of water. After a few days you can use this when watering your plants to give them a quick feed and nutrient boost. House plants love this.

Use as a mulch:

A mulch is a layer on top of the soil to protect its structure and soil life from the elements. In hot countries straw is used, but our slug and snail population love it too much. Compost doesn't give them a good home though.... Adding a 5cm layer of compost on top of your soil each autumn does wonders for your soil fertility. You don't need to dig it in! A layer on top is far more protective and digging can damage the soil life that our plants rely on. Worms will carry it into the soil and your plants roots will be able to access the nutrients just fine. And if you don't grow any plants yourself any gardener friend would be over the moon to receive home grown compost!

Congratulations! You have reduced the amount of food waste sent to landfill and saved money on buying compost. We hope you have enjoyed composting and enjoy your vegetables and plants!

DISCLAIMER: This pack is purely to be used as guidance. Composting is at your own risk and the Highland Community Waste Partnership and individual partners cannot take any responsibility for your health & safety. Please consider cleaning your food waste container regularly as well as placing your compost bin in a safe and secure location.



Troubleshooting

Problem	What it looks like	Cause	Solution
Too dry	Compost is dry and dusty without any soil life	Too many browns add	Sprinkle with water until wetted through and in future add equal amount of greens when adding browns
Too wet	Smelly, slimy and soggy	Too many greens. The greens added have been added in too thick a layer of not mixed properly with browns	Add more brown materials and mix in throughout the compost. Make sure it can drain properly.
Flies	Lots of little flies (especially in a lidded container when the lid is lifted)	Food scraps on the surface	Bury green additions in slightly and top off with browns.
Rodents	Tunnels in compost or a small furry face looking at you when you open the lid	Adding cooked foods or meat/fish/dairy/oil etc.	Only add uncooked scraps (and never items from the "Don't" list) and bury well under browns. Turn or twist compost with a garden fork regularly.

USEFUL LINKS AND INFORMATION

There is a lot of useful information about composting on the Internet. The links provided below are examples only, and you may find or know about other great resources too!

Look at Pinterest or YouTube to find others.

Composting guides / videos:

<https://wasteless.zerowastescotland.org.uk/articles/easy-guide-to-composting-home>

https://www.zerowastescotland.org.uk/sites/default/files/Composting_at_Home_-_leaflet.pdf

<https://horticulture.co.uk/how-to-make-a-compost-heap/>

MOO Food Youtube guides to composting :-

<https://www.youtube.com/channel/UC6dJ-eZW-lvwm0gHqoD9XCQ/videos>

How to make compost bins at home:

https://youtu.be/fW_DVNUt7ms

<https://www.youtube.com/watch?v=d7CckR1WOX4>

This booklet was created using information and resources provided by Lochaber Environmental Group, MOO foods and Transition Black Isle. Thanks to them for their support and willingness to share their materials to create this guide.



MOO Food

www.moofood.org



www.lochaberenviro.org.uk

www.transitionblackisle.org

www.keepsotlandbeautiful.org/highlandwaste

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