Keep Scotland Beautiful

Introduction

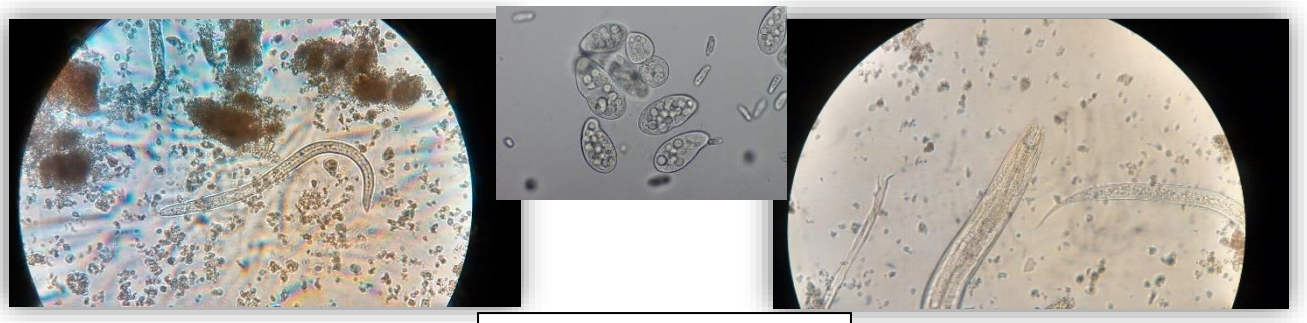
Most gardeners have long understood the value of homemade compost as a good source of organic matter. This rich, dark, earthy material improves the soil and creates a healthy environment for plants to grow and thrive.

Composting is the controlled decomposition and natural breakdown of organic residues. It transforms raw organic waste materials into a biologically stable substance that makes an excellent soil amendment.

Using compost improves soil structure, water holding capacity and increases biodiversity. It is a sustainable solution to providing nutrients to your soil and plants.

Making Compost - the decomposition process

Compost is the product of a complex feeding pattern involving different micro / macro-organisms that include bacteria, fungi, protozoa which include ciliates and flagellates, several species of nematodes, actinomycetes, tiger worms, and various beetles and insects.



Some microbiota in

Aerated Compost Tea

1st mesophilic stage up to 20c-micro-organisms work hard at decomposing the organic waste, the heat they produce causes the compost to heat up and decompose.
Thermophilic stage 20c-40c Different organisms become active.
2nd mesophilic stage 20c
Maturation stage this is the stage when the compost is ready to use. Over 50c pathogens are destroyed. Over 65c everything in the compost pile is killed. If your pile does reach 65c, ensure aeration by turning, this will cool the pile down.

There are 4 stages to breaking down the organic waste before it reaches the stage where it can be used on the garden as compost. During each stage, different organisms are working hard at decomposition.

For best results, the **optimum ratio of carbon (browns) to nitrogen (greens) is 2/3 parts browns to 1-part greens, ensuring that the oxygen level is sufficient, and the compost is not**

allowed to dry out or get too wet. If the compost becomes smelly this is probably due to too many greens making the pile anaerobic. If the pile is not breaking down, then this could be due to not enough browns or lack of water. Remember, it's the organisms in the compost pile that generate the heat and drive decomposition.

Composting systems

There are many systems on the market, ranging from large New Zealand three bin systems to small tumbler systems. They vary in price, but you don't have to spend a lot of money to get great results, something as simple as wire baskets will do the job.

Siting your compost

Any pile of organic waste will eventually rot, but we want to create an 'active' compost pile, and a well-sited system can speed the process up. Choose a level, well drained spot but importantly make it accessible; if it is too far away the pile will be forgotten. Ensure an open bottom unless you are using a Hot Bin or other closed system. Do not place the composting system on a non-permeable surface such as concrete or asphalt.

What to put in your compost?

CARBON (BROWNS)

- Leaves - shredded will decompose quicker. Straw, sawdust.
- Eggboxes, cardboard, newspaper and non-glossy paper. Most newspapers use water or soy-based inks, they may contain some toxic compounds, but the trace levels are nothing to be worried about.
- Corn husks, nutshells, ashes from wood, small twigs.
- Brown paper bags, cotton, string, thread, wool and vacuum bag waste.

NITROGEN (GREENS).

- Vegetable and fruit waste.
- Eggshells - although not strictly a carbon source they do provide micronutrients such as calcium.
- Teabags/tea leaves, coffee grounds.
- Grass clippings - but not too many.

Remember your ratios.

DO NOT ADD

COOKED FOOD, DOG OR CAT POO, DISEASED PLANT MATERIAL, FISH, MEAT, DAIRY, WEEDS, OIL, GLOSSY PAPER.

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Activators.

We can add activators to the compost pile to speed things up. Bacteria is the prime micro-organism that decomposes the organic waste. Providing some extra 'food' for the bacteria and fungi can speed up the decomposition process. There is no need to buy targeted activators; everyday products such as porridge oats, sawdust, straw, dried seaweed and alfalfa can work just as well. The picture on the right is compost activated with porridge oats, seaweed and alfalfa. The white 'fuzz 'is fungal hyphae.

Don't throw away materials when you can use them to improve your lawn and garden! Start composting instead.

HAPPY COMPOSTING

Any questions please contact our volunteer Penny Wright.
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Useful links & further information:

www.rhs.org.uk/soil-composts-mulches/composting