



C2 REVEALING GOOD PRACTICE

Composting

At a glance

Composting provides nutrients for growing plants at a low or zero cost.

- Choose the right location.
- Dig a hole or build on top of the ground.
- Place drainage stones at the base.
- Add a layer of dry vegetation.
- Add a layer of vegetable waste.
- Add a thin layer of animal droppings.
- Add a thin layer of top soil sprinkled with water and ash.
- Repeat these layers until full.
- Keep the compost moist.
- Keep the temperature right. Cover to protect from rain and increase the temperature.
- Mix after six weeks.
- Use after two to three months when brown and crumbly.



Why use this tool?

Nutrients need to be added to soil in order to feed crops so they produce a high yield. Compost provides nutrients and helps soil to hold water. It is free, easy to make and doesn't use chemicals which can be expensive and can harm the environment.



A brief description

This tool explains one way of making compost. There are many other methods: some of these can be found in the 'Finding out more' section below. In this method, compost is made by putting layers of different natural materials in a pile and providing the right conditions for it to rot well.



Explaining the words we use

Decompose – decay and break down: an essential part of the composting process

Nutrients – a substance that provides nourishment essential for life and growth

Water table – the level of water, held within the soil or rocks below the ground surface

Awareness-raising

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Time taken

Approximately one hour to make the initial compost pile, or several hours to dig a compost pit. Six weeks later, you will need 30 minutes to one hour, depending on the size of the compost, to turn the heap. After two to three months, the compost will be ready to use.



You will need

- A few large stones, stalks or twigs, vegetable waste, top soil, water and ash.
- A spade or large fork.
- A plastic sheet, sacking, matting or dry grass to cover the compost.



Keys to success

- **Choose the right location to make your compost.** This will depend on the climate and other environmental conditions. If you are in a hot climate, choose a small area of land that is shaded from the sun so the compost doesn't dry out and stop rotting. In colder climates, it is best to make the compost in an area where it will receive heat from the sun.
- **Decide whether the compost will be made in a pit or above the ground.** In dry areas, make compost in a pit in the ground, approximately 1 metre deep. In wetter areas, or in places where the water table is high, it is better to make compost in a heap or in a dark container above the ground.
- **Get the right mix of green and brown (wet and dry) matter.** Compost that is too dry or too wet will not decompose properly. If compost is too dry, use a spade or fork to turn and mix the compost. If necessary add more green / wet material or add male urine. (Urea speeds up the composting process.) For compost that is too wet, mix in twigs, dry leaves or even shredded paper or cardboard.
- **Keep the temperature of the compost right.** The ideal temperature is around 60 degrees Celsius. This is hot enough to kill the most harmful bacteria and weeds. It is also hot enough to break down composted material that could otherwise attract vermin, such as meat, cooked food, plant husks, animal faeces and cut grass. Temperatures can be increased by covering or wrapping the compost in black plastic or painting the container black. Or, you can make the compost bigger and gradually turn it, over several days, so the contents in the middle are hot. You could even build an insulating layer around the compost from polystyrene, or even straw or wool if you can keep it separate from the compost.
- **Watch out for vermin, flies and larvae** – if you can see these, your compost is not working: you need to get it drier and hotter.

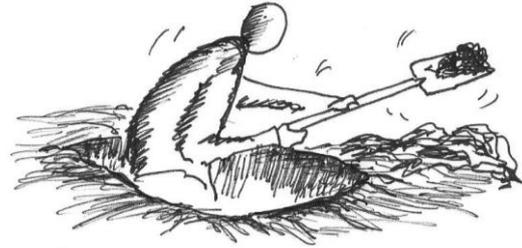


What to do

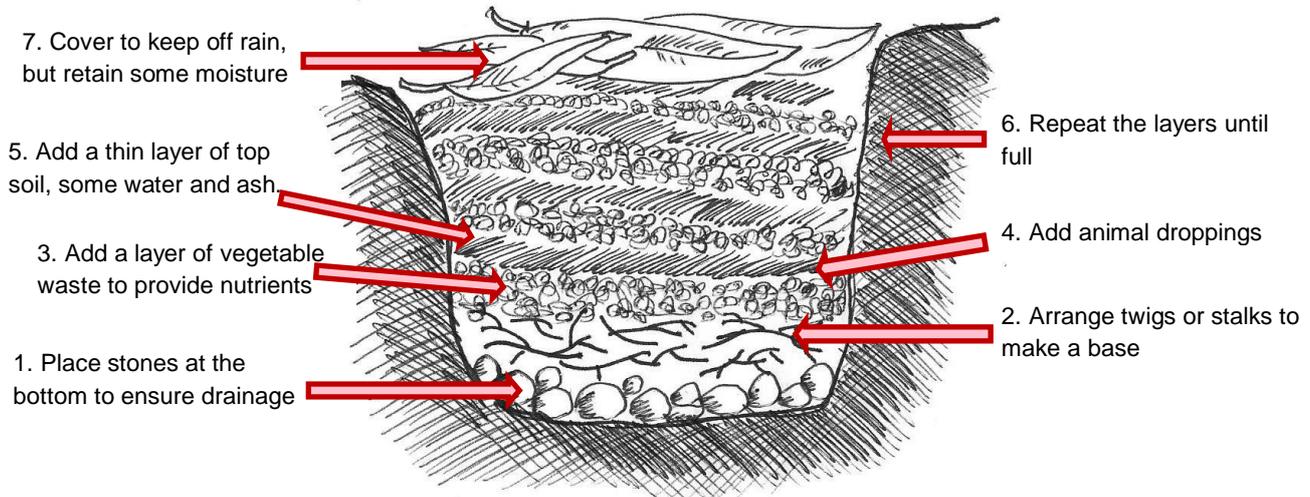
Awareness-raising
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There are many ways of making compost. This is just one method.

You first need to decide where to make your compost. If you are in a hot climate, choose a small area of land that is shaded from the sun so the compost doesn't dry out and stop rotting. In colder climates, it is best to make the compost in an area where it will receive heat from the sun. In dry areas, make compost in a pit in the ground, approximately 1 metre deep. In wetter areas, or in places where the water table is high, it is better to make compost in a heap or in a dark container above the ground.



1. Place a mix of large and smaller stones at the base. This ensures that water can drain into the soil below. Please note, if you are making the compost on stony or sandy soil, you won't need to do this.
2. Add a layer of dry or hard vegetation such as crop stalks, twigs or husks.
3. Place a similar depth layer of vegetable waste on top of the stalks.
4. Add a thin layer of animal droppings (also called manure) on top.
5. Then add a thin layer of top soil, sprinkled with water and ash.
6. Repeat these layers (vegetable waste, animal droppings, top soil, ash) three or four times, over a period of weeks as more food or crop waste becomes available.



Using layers is just one way of making compost. You don't need to build in layers, as long as there is a good mix of vegetables, dry materials and air.

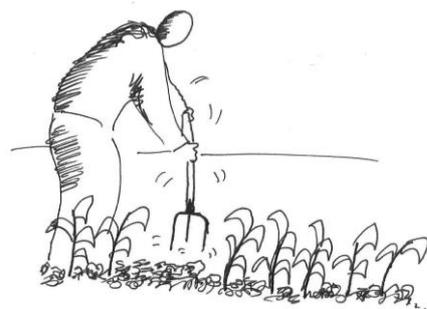
Tip: adding worms can help speed up the composting process.

7. Keep the compost damp, but not wet, or it will stop rotting. Add water if the heap becomes too dry.
8. Cover with a plastic sheet, sacking or matting to keep off rain and to increase the internal temperature.
9. After six weeks, dig another hole (or clear a small piece of land if your compost is above the ground). One layer at a time, turn the heap from where it currently is into the new hole (or piece of land). This helps the compost to rot. Or, you could turn over the contents with a spade or fork every few days to speed up the rotting process. If you do this, there is no need to move the compost from one location to another after six weeks.



After six weeks, or when the compost has reached a good size, you should stop adding to this compost and start building a new compost. This will ensure a regular supply of compost for your garden or crops.

10. After two to three months, the compost will be ready to use. Compost is ready when it has turned brown and crumbly.



Finding out more

- Tearfund (1990) *Footsteps 7 – Maintaining soil fertility* http://tilz.tearfund.org/en/resources/publications/footsteps/footsteps_1-10/footsteps_7/maintaining_soil_fertility/
- Practical Action technical brief on how to make a compost bin <http://practicalaction.org/compost-bin-manufacture> For composting in emergencies, see Oxfam (2008) *Composting of organic materials and recycling* <http://policy-practice.oxfam.org.uk/publications/composting-of-organic-materials-and-recycling-126187>
- The PACE Project, Action Sheet 31: *Practical composting* <http://www.paceproject.net/Userfiles/File/Soils/practical%20composting.pdf>

Related tools:

- A1 – Revealing climate change: information for facilitators [A1: Climate & environment-1]
- A2 – Different ways of adapting to climate change [A2: Climate & environment-1]
- B – Caring for God's world (Bible study) [B: Climate & environment-2]
- B – Caring for our environment (Bible study) [B: Climate & environment-3]
- B – Stewardship of the land (Bible study) [B: Climate & environment-4]
- C2 – Conservation agriculture [C2: Food & livelihoods-5]
- C2 – Developing rural home gardens [C2: Food & livelihoods-8]
- C2 – Developing urban home gardens [C2: Food & livelihoods-9]
- C2 – Establishing a tree nursery [C2: Climate & environment-2]