5 indispensable tips for successful composting

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1. Habitat

Compost heaps should be applied directly to the grown soil, so that micro-organisms, fungi and yeasts essential to the rotting process can penetrate the surface unimpededly. Sealed areas should be avoided by all means, as well as sandy grounds.

One of our compost heaps

Parameters like humidity and temperature are also important to the process of decomposition, implying that the composting location should not be exposed to blazing sunlight in order to avoid desiccation. As variations in temperature characteristic of all-to sunny locations can be extreme, they might have a negative impact on the biological activity within the compost soil. On the other hand, a permanently cold location in complete shadow slackens the process tremendously.

Humidity as such is quite easy to handle. As long as you water your compost heap generously every day to every other day on an regular basis, you should be fine. As biochar functions as an effective water storage in itself, it won't even cause any problems if you leave watering your heap for three or four days every once in a while. At worst, the rotting process will slow down until you resume your watering routine.

As far as our experience goes, the ideal composting habitat is both semi-shady and sheltered from the wind. While the half shade caters for moderate variations in temperature, the doldrums prevent dehydration.

Next to the compost, we recommend planting elderbushes or hazelnut trees which, according to our tests, additionally enhance the decomposition. We assume this is due to special fungi (arbuscular mycorrhizal fungi) living in symbiosis with the tree roots and penetrating the compost.

2. Stacking

Basically, almost all organic waste from your kitchen or garden can be used for composting unless it is chemically contaminated. In case you have such contaminated kitchen waste, please read below what you can do about it.

Evidently, the following leftovers are most suitable for composting:

- fruit and vegetables
- stale bread, ideally chopped
- tea leaves and coffee grounds
- lawn- and bush-clippings
- foliage

The more you chop up or crush your organic leftovers, the larger becomes their specific surface. And the larger their surface, the more easily and quickly can the process of decomposition get under way. Thus, your leftovers will decay much more quickly and efficiently. But please don't overdo the crushing. If the pieces get too small, too little oxyygen will be able to get through, thus impeding the process. Commercially available garden shredders will provide you just with the suitable size of particles.

Unsuitable for composting are any kind of meat or bones. They will only attract rats, racoons and other burrowing animals.

Chemically treated fruit skins, seed-carrying herbs or diseased plant parts however, can be composted without any difficulty if during the hot rotting process, temperatures of more than 60º C can be reached. How you get your compost heap to exceed 60º C during the rotting process, will be explained below.

IMPORTANT: Make sure that no more than 75º C are reached in your compost heap, as from this temperature the so-called denaturation of the DNA takes place. In other words, life dies off.

Larger quantities of lawn-clippings will have to be spread out and dried beforehand to avoid premature decay which would turn them useless for composting. You might be aware of the fact that compact piles of lawn-clippings might well heat up to more than 75º C while rotting.

For the bottomt layer, you fill in up to 20 cm of rough material, e.g. twigs. On top, you then put your kitchen and garden waste. Please make sure that humid materials like kitchen leftovers or lawn-clippings are well mixed with dry compost materials like twigs or straw to ensure sufficient ventilation. Again, this protects your heap from putrescence and mould.

As a start-up aid, we recommend to add occasional layers of ripe compost (Terra Anima® humus soil), so that the microorganisms contained can penetrate the compost more quickly. Once your container is full, it should be covered with garden soil or compost to facilitate the process of decomposition.

As mentioned above, please see to it that your compost will be kept evenly moist all the time to ensure decomposition of the material. If it is too dry or too cold (like in winter), rotting stops.

3. Biochar

In order to produce exceptionally vital and eutrophic compost, you should use biochar on all accounts. Biochar is not a fertilizer, but a scaffold, habitat and repository for microorganisms, minerals and water. Biochar looks exactly like ordinary charcoal, yet shows completely different characteristics.
Due to its porosity, our biologically activated biochar is already soaked with microorganisms and nutrients. By using vegetable carbon, you can be sure that it delivers its riches to your compost. With ordinary charcoal, it would be completely different. Instead of adding valuable nutritive substances, it would withdraw them from your compost.

Biochar stimulates the biological activity of the soil and has a positive impact on the interaction of manifold functional groups of microorganisms, which for their part enter into a symbiosis with the roots of adjacents plants. Moreover, on the highly porous surfaces of the carbon (up to 400m²/g), dynamic bondings, debondings and transformations of mineral and organic molecular groups take place, exercising a great influence on the nutrient supply in the soil.

The incorporation of biochar will cause a change in the soil environment, allowing more biologically efficient utilization of energy and materials.In order to achieve a new state of equilibrium in the change of the soil

milieu, however, it takes time. First, the coal particles have to travel countless times through the digestive organs of worms, be colonized by bacteria and fungi, as well as adsorb humins and mineral substances.
For this reason, we introduce the biochar into the compost at the beginning of composting and thus achieve the rapid supply of compost through the already biologically activated coal. The negative consequences of charcoal, e.g. dust formation, are thereby avoided.

We have tried different types of biochar and are proud to say that our biochar has done far better in our tests than other products. We will not tell you the secret of our success, but our coal differs in the way of activation from the coal of other suppliers. Activation means replenishing the coal with life and nutrients.

4. Starting resp. activating the rotting process

It is a common mistake to believe that you are the one who makes the compost. Good compost is neither produced by itself, but it is the work of innumerable organisms from the smallest bacterium to the earthworm.

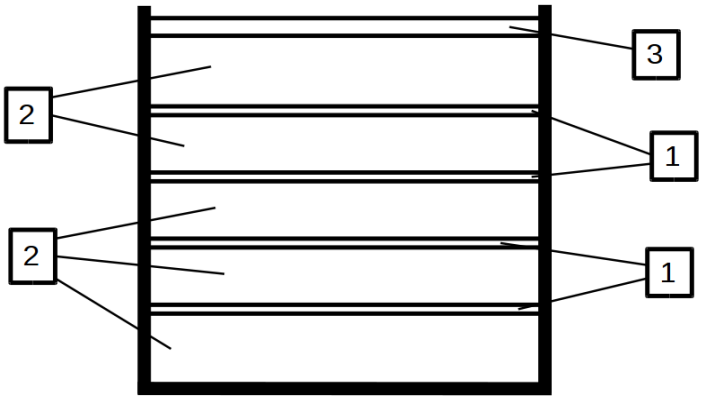
You start with filling the compost boxes with composting materials, composted, like lawn-clippings, hedge-clippings, bed remains or chopped tree-clippings. Fill them continuously in one go or over a time interval of 8 to 10 weeks, as you prefer. There are no advantages or disadvantages to be expected either way.

Between the individual layers of finished compost from the previous year, you distribute about 10 liters of biologically activated plant coal and a little Terra Anima® humus soil. You repeat this procedure until your heap has reached the desired height.

In our experience, about a metre high heap is best suited for composting. If you would like to save space, you can of course increase the piles further. You simply continue with the layers as before. For reasons of convenience, we have limited the heaps to approx. one meter. As a result, the layers of our compost are repeated three times with a thickness of about 30 - 35 cm.

The following images illustrate the layer succession. Start or vaccinate the newly built compost heap with the tips below. You do not have to start or vaccinate the rearranged compost.

Stacking of new compost



1. *activated bioachar + Terra Anima® humus soil mixed, 50/50, layer thickness approx. 1 – 2 cm*
2. *green waste or kitchen waste (for the bottom layer, please avoid kitchen scraps), layer thickness approx. 20 – 25 cm*
3. *your own garden soil or ripe compost (> 1 year), alternatively Terra Anima® humus soil, layer thickness approx. 2 – 3 cm*

To "start or vaccinate" we use our herbal manure or the yeast mixture. Spread about 2 to 3 litres of this mixture evenly over the top layer. Then use a rod to punch four holes vertically from above, approx. 80 cm deep into the heap (at a filling height of 1 metre) and pour one to two litres of herbal manure into each hole again. The holes are then closed again.

HUMOFIX®

HUMOFIX® is a powder of 5 medicinal herbs, oak bark, lactose and honey. You can buy it at Abtei Fulda (Fulda Abbey). We have tried it and can recommend it to you with a clear conscience.

Herbal Manure

In spring, we covered the first nettles (20-25cm high) and dandelion leaves in a bucket with rainwater, left them for 4 weeks, poured them into a 100l rain barrel and filled them with rainwater.
During the summer, we added more medicinal herbs (e.g. comfrey).

Yeast-sugar-water mixture

Crumble the yeast (42g) into a bucket and mix with 3 tablespoons of sugar until it is liquid, then add 500 to 1000g of sugar and pour 10 to 15l of rainwater over it. Stir until everything has dissolved and then pour over the compost heap.

5. Relocation

Many gardeners fill their compost heaps over the year and then let them ripen until next spring. Alternatively, you can use our tips to achieve a good time-saving fast compost. You can optimize and accelerate the rotting process by moving the heap. With fast compost (as described in section 4), the compost must be moved several times. Fast compost can be moved for the first time after 4 to 8 weeks (depending on weather conditions). Then every 2 to 4 weeks until the appropriate degree of ripeness is reached.

For this purpose, dry material, e.g. from the edge area, is mixed with wet and already further rotten material. Dry areas that have already been penetrated with white fungal mycelium are detected and can be poured with rainwater. This restarts the rotting process that has been stalled by the dryness.

This mature compost should also mature until next spring. Why? Due to the high initial temperature, weed seeds become unable to germinate and pathogens are only killed by the activity of various fungi.

During relocation, air enters the compost and promotes the activity of oxygen-loving microbes, which produce a variety of antibiotics, such as penicillin and streptomycin. They are necessary for the self-cleaning power of soil because they kill human, animal and plant pathogens.

Various fungal groups produce vitamins of the B group, as well as precursors of vitamins A and D2, but also aromas and flavors.

Approved sprays on lemon, orange or banana peel are also decomposed in compost within a few months.

6. Supplementary information

As a complement, we also have a recommended application for your ready-to-use compost soil or for our Terra Anima® humus soil.

Ornamental plants
It is best to mix the compost with soil or sand in a ratio of 1:2 to 1:5.

Palms

Since the compost has a pH-neutralising effect after our production, please be sparing with the addition. Many palms prefer a slightly acidic soil. We recommend to mix in a maximum ratio of 1:5. Please inform yourself about the pH value that your palm loves. The more acid the soil should be, the less compost you should add.

The following table provides further information:

Plant variety	**Quantity per square meter**	**Comment**
light feeder	4 litres	e.g. garden radishes, beans, peas, corn salad, lettuce
moderate feeder	6 litres	e.g. cucumbers, potatoes, carrots, radish, leeks, kale, spinach
heavy feeder	8 litres	e.g. tomatoes, cauliflower, Brussels sprouts, red and white cabbage, broccoli
flower beds	4 litres	apply and work in superficially
shrubbery	4 litres	apply underneath
trees	4 litres	in autumn, cover the slice of tree 2 cm thick
lawn	2 litres	apply finely sifted in spring
planting holes	4 litres	for trees, bushes and shrubs, fill the planting holes with a mixture of compost and garden soil at a ratio of 1:3

For heavily used or even degraded soils, larger quantities may be required.

7. Contact

Do you have any questions or comments? Just contact us.

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