Why Compost?

Composting provides you with rich organic matter that does wonders to improve the quality of your soil. Whether you sprinkle compost on the surface of the soil or work it in, your garden plants and landscape will grow healthier and stronger thanks to the addition.

Compost:

- Incorporates organic matter to feed micro and macro organisms that maintain a healthy soil food web
- Enriches soil with nutrients for plant growth
- Releases nutrients slowly so they don't leach away as some synthetic fertilizers do
- Improves soil structure
- Promotes drainage and aeration in clay soil
- Enhances moisture and nutrient retention in sandy soil
- Reduces soil compaction
- Inhibits erosion
- Suppresses soil-borne diseases and pests
- Attracts earthworms, nature's best soil builders

Getting Started

• Choose a sunny spot in your garden for your compost bin. For a worm farm, choose a shady spot out of direct sunlight and keep well watered in the summer months.
• Add materials to your compost heap in layers of food scraps, garden clippings and paper, cardboard (shredded) or dry leaf litter. It is important to balance the amount of green or wet materials such as food scraps and lawn clippings, with brown or dry materials. Layering helps to build up heat in the pile and speed up the composting process.
• Ensure your compost heap is kept slightly moist. Turn your compost at least once a month to add oxygen.
• When the compost is dark and crumbly - after four months or so - it will be ready to use. If you have recently been adding to the heap you may need to take the more composted material from the bottom. Dig this into your garden or add to the top of an established garden bed as mulch.

Key ingredients for your compost:

Air
Compost is an aerobic system. The microbes in your bin require oxygen to survive. To ensure your heap has enough air:
• break up any clumps that might exclude air
• turn the pile to keep it loose and help air circulate
• punch holes in the container or insert a slotted agricultural pipe into the heap
• add some compost worms

Water
Your compost heap should be kept moist by the addition of wet materials and/or water.
If it gets too dry the composting process will slow down.
If your heap is too wet the materials will compress and vital oxygen will be excluded.
This will slow down the process and create an unpleasant smell.

Food
Compost needs two types of food – 'browns' and 'greens'
'Browns' include dry materials such as straw, autumn leaves, ash, dolomite, cardboard, paper, wood chips and sawdust.
'Greens' include wet materials such as grass clippings, fruit and vegetable scraps, green leaves, coffee grounds, tea bags and fresh horse manure.

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✓	Vegetable and fruit peelings, paper and cardboard (shredded), small prunings, flowers, grass clippings, leaves, eggs shells (crushed), used potting mix, tea bags, coffee grounds, wood	✗	Meat and bones, dairy products, large branches, diseased plants, weeds, magazines, bleached paper, pet droppings.

Nitrogen – carbon ratio in compost

All compostable materials are either carbon or nitrogen-based, to varying degrees. The secret to a healthy compost pile is to maintain a working balance between these two elements.
Carbon - carbon-rich matter (like branches, stems, dried leaves, peels, bits of wood, bark dust or sawdust pellets, shredded brown paper bags, corn stalks, coffee filters, egg shells, straw, wood ash) gives compost its light, fluffy body.
Nitrogen - nitrogen or protein-rich matter (manures, food scraps, green lawn clippings and green leaves) provides raw materials for making enzymes.
A healthy compost pile should have much more carbon than nitrogen. A simple rule of thumb is to use one-third green and two-thirds brown materials. The bulkiness of the brown materials allows oxygen to penetrate and nourish the organisms that reside there. Too much nitrogen makes for a dense, smelly, slowly decomposing anaerobic mass. Good composting hygiene means covering fresh nitrogen-rich material, which can release odours if exposed to open air, with carbon-rich material, which often exudes a fresh, wonderful smell. **If in doubt, add more carbon!**

Problems with your compost

Problem	Cause	Solution
Smelly compost	too much moisture and/or lack of oxygen	- mix in dry (brown) ingredients such as dried leaves, shredded paper or straw - turn the pile to push air through
Compost attracts animals, rodents, flies	wrong ingredients and/or open compost heap	-do not add meat, fish, bones, dairy products, excess bread or cake or oily or greasy food -cover fresh layers with soil -place bin on wire mesh and place lid on top
Compost attracts ants	compost is too dry	add more moisture or moisture rich ingredients
Compost attracts white worms	compost is acidic	-add less acidic materials -add a handful of lime or wood ash and mix well
Compost takes too long to break down	compost is lacking nutrients, air and/or moisture	-add equal amounts of 'browns' and 'greens' -turn the pile to aerate - check the moisture content – add moisture rich materials and water

Insects in compost

Compost piles naturally attract insects. In fact, in a healthy compost pile, insects play a vital role in the decomposition process. Compost piles have a micro-ecology of their own. Insects are needed to establish balanced compost ecology. Though an overabundance of a few specific insects may indicate an imbalance, a healthy compost pile re-establishes its proper balance, given time. Attempting to remove one type of insect can disrupt the balance of the pile, slowing down decomposition.

Primary Consumers include the organisms that break down and consume organic matter in the compost pile, such as leaves, grass clippings, etc. All primary consumers are herbivores; they include insects as well as other creatures, such as bacteria, fungi, nematodes, mites, snails, millipedes, slugs and pill bugs. Each member of this category offers its own benefit to the compost.

Secondary Consumers are herbivores and carnivores. They eat organic matter in addition to members of the primary consumer group. This category comprises nematodes, springtails, protozoa, mites and feather-winged beetles. Secondary consumers feed largely on the decaying bodies of the primary consumers.

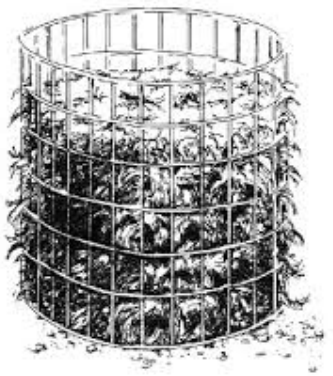
Tertiary Consumers eat the members of the secondary consumer group. These insects and other organisms include centipedes, mites, rove beetles, ants, earwigs and spiders. Members of this category, generally the largest insects in the pile, are most visible to the naked eye. Some composters may be concerned that these insects will travel to other parts of the landscape and cause damage to desirable plant species. Insects in a compost pile are actually quite content where they are, and they are unlikely to seek a new home as long as the compost pile is continuously fed fresh organic matter.

Worms Although not technically bugs or insects, worms come up in virtually every conversation about compost because of the benefits they provide. Red worms are of particular value in compost piles. They turn and aerate the soil and other organic matter, which increases oxygen and hastens decomposition. Additionally, when worms digest organic matter, they leave behind castings that are high in nutrients and which greatly improve overall compost health.

Flies and Maggots may indicate that you have meat or fat in the pile, neither of which is recommended. These insects are more pesky than harmful, but the presence of meat or fat in your compost could attract all sorts of other unwanted critters as well. Decaying vegetable matter draws fruit flies, also known as vinegar flies, which help in the decomposition process.

Compost bays – bins

A simple and effective series of home-made compost bays allows for stages of compost and continuous layering. Once the bay is full it is left to compost, possibly with the help of aeration – turning the heap into the next bay.



When choosing a commercial bin, check for aeration and look for an opening at the bottom to take out ready compost.

Tumblers are good for aeration / mixing of the contents. Look out for stability and think about the weight that you may need to move when you want to 'tumble'.

Designs and materials used to contain compost heaps are only limited by your imagination and handy abilities.