Home Composting

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Home gardeners have relied on compost for generations. Composting is the biological process of recycling organic matter – leaves, lawn clippings, plant food scraps, etc. – into a valuable fertilizer that can enrich soil and plants. When organic waste is recycled, the resulting product, **compost**, can be used to improve soil quality and help plants grow.

The Benefits of Composting

Compost contributes to healthy and resilient plant growth. Compost adds organic matter to soil, allowing for more oxygen penetration and greater water retention. Compost provides a balanced blend of essential nutrients to plants and acts as a reservoir for applied nutrients. Unlike many synthetic fertilizers, which act quickly and can burn plants, compost is gentle and slow to release.

The Composting Process

Composting is a biological process by which non-living organic matter undergoes decomposition from less stable to more stable forms. The breakdown process involves microorganisms, such as bacteria and fungi, which use organic matter as a nutrient source for their own growth and development.

The microorganisms which carry out these processes are aerobic, meaning that they need oxygen to live. The oxidation of organic materials results in the release of energy – heat. A well-built compost heap can have internal temperatures reaching 150 F, or higher. Many people are reluctant to build a compost pile because of a fear of introducing insects and disease in the garden. The high temperatures produced in a well-built compost pile will alleviate any such problems.

Creating and Managing the Compost Pile

Location

When selecting a site for composting, make it convenient. If kitchen scraps make up a large portion of the material being composted, locate the compost pile near the house. If the composting material is composed primarily of yard waste or excess from the vegetable garden, locate the pile near the garden.

Ideally, locate the compost pile away from large trees. Invading tree roots will quickly spread through the pile, drying the pile out and utilizing valuable nutrients. Sunlight adds needed heat and speeds the decomposition process. Locate the pile near a sources of water. The decomposition process requires moisture and occasional applications of water may be needed.

Size and Building Material

Compost piles should be large enough to prevent frequent drying or heat loss. A compost pile should be at least 3 feet by 3 feet. Bigger is better as long as the pile can be properly maintained.

Wire fencing is a cheap and readily available material for containing the materials placed in a compost pile. Solid wood or plastic enclosures reduce oxygen exchange and wood, as an organic material, will eventually rot. Treated lumber will

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prolong the useful life of the wood but may contaminate the compost.

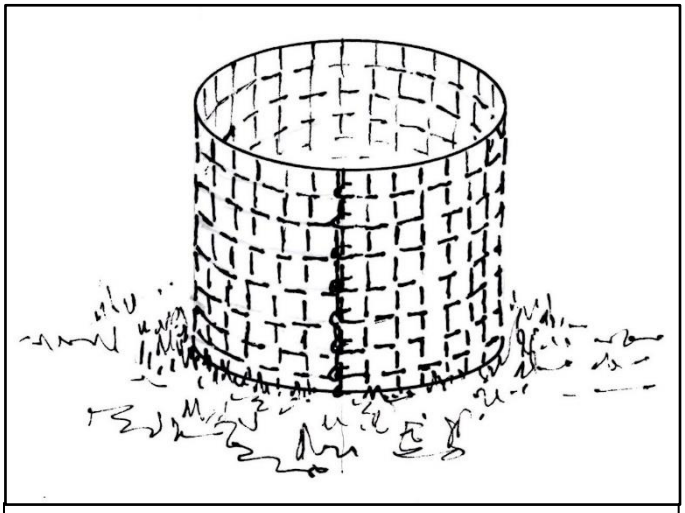

Figure 1. A simple compost pile can be built with galvanized fencing. The large openings allow adequate aeration and the open top allows easy access.

What to compost

A variety of organic material may safely be placed in a compost pile. Yard waste often makes up the bulk of materials used. Dry leaves and fresh grass clippings free from pesticides and herbicides, may be placed in the pile, but do not build a pile exclusively of one or the other. Dry material provides carbon and fresh, green organic material provides nitrogen. A balance of both is needed for proper decomposition. Sawdust from untreated lumber, shredded newspaper and straw may be composted, but like dry leaves, needs to be mixed with fresh green material.

Large, woody material should be excluded unless it has been chipped or shredded. Most kitchen vegetable waste is another source of fresh organic material ideal for composting, but it is advisable to avoid onions, garlic and citrus peels. These contain materials which have been shown to repel worms and microorganisms and may slow the decomposition process. Coffee grounds and loose tea leaves may be composted. Egg shells may be included, but should be rinsed before placing in the pile. Do not include meat or meat scraps. Material of this type will result in foul odors and will attract vermin.

Compost Pile Maintenance

Composting will occur even if a pile is left alone. However, a properly maintained compost pile will result in more and quicker compost for the garden. As stated earlier, composting is an aerobic, oxygen-requiring process. Therefore aeration of the pile is important. The pile should not be compacted. Periodic turning of the pile with a fork or rake will allow adequate oxygen levels throughout the pile. Use of screening or fencing rather than solid materials also will increase oxygen availability, resulting in a faster production of useable compost.

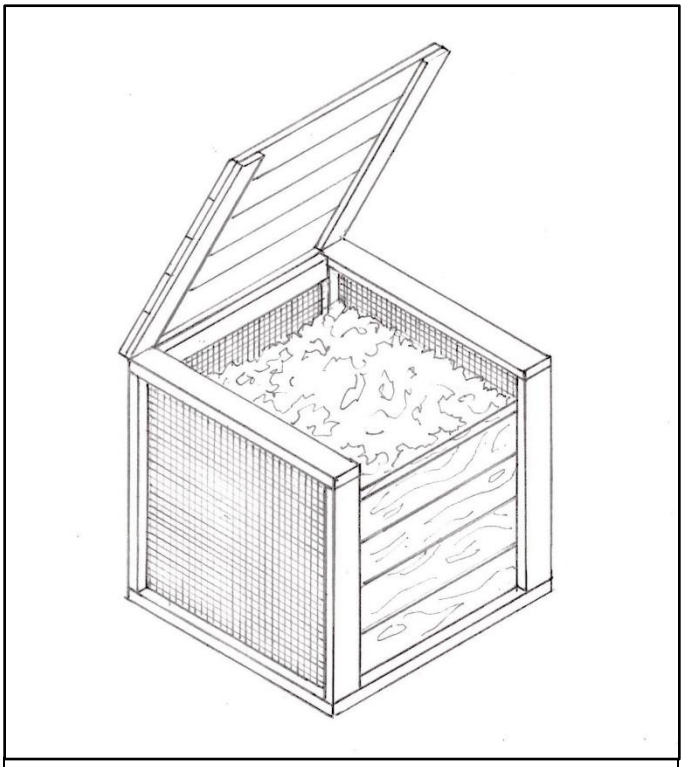

Figure 2. In this compost pile, hardware cloth or screening on the sides provide adequate oxygen, removable front slats allow easy access to finished compost, and the top provides aesthetic appeal.