



COMPOST: BENEFITS AND USES

Compost is filled with microscopic bacteria, fungi, and other organisms that work together to release nutrients into soil. The nutrients are made available at a rate suitable for plant uptake. Compost is not classified as fertilizer because it has a lower level of soluble nutrients, but it does increase the fertility of soil because of the very rich and diverse community of microbial life it supports.

Another great benefit to the rich microbial life in compost is that the microscopic critters aid in the formation of soil aggregates, the building blocks of good soil structure and tilth. Bacteria and fungi attach themselves to soil particles and bind them together. When they cling to solid particles, bacteria and fungi form tiny aggregate crumbs.

The spaces in these aggregates create space for excess water to percolate through the soil and through which air can reach plant roots. They also form caves and hollows that are reservoirs of water protected from evaporation. Tiny plant roots penetrate these aggregates and find these water reserves, even in times of drought. These caves and hollows are also homes for beneficial predators that feed on the bacteria and fungi, releasing their stored nutrients to the soil, and on pathogenic and root feeding organisms, thus protecting plant roots from disease and damage.

In short, compost releases nutrients, improves soil structure, helps the soil to retain water, and provides disease and pest resistance in the soil.

Using Compost as a Soil Amendment

Compost can be used to enrich garden soils before planting. Amend soils by mixing compost thoroughly into the top 6-12 inches of existing soil.

In Flower, Groundcover and Vegetable Beds:

- In established gardens, mix 1-3 inches of compost into the top 6-12 inches of soil each year before planting. You may wish to add that amount of compost twice a year.
- For poor soils or first year gardens, apply 3-4 inches of compost and mix into the top 6-12 inches of soil. This is best done in the fall, before a spring planting. An additional 1-3 inches of compost could be worked into the soil right before planting.
- After planting apply a $\frac{1}{2}$ -1 surface mulch. Keep away from plant stems. The mulch will add nutrients, protect the soil, save water and help to control weeds.

Lawns:

- Before planting a new lawn, till base soil to a 6 inch depth.
- Mix 2 inches of finely textured compost into the loosened base soil before planting seed or laying sod.

For Planting Trees and Shrubs:

For shrubs and trees, work about 3 inches of compost into the top 6-9 inches of soil in the 3-6 foot area surrounding the planting hole.

Be cautious about amending soil in holes for trees and shrubs. While some experts recommend mixing 30% compost into the soil, others say that if too much compost is added to the back-filled soil, the roots will not grow past this gold mine of organic matter, depriving the tree or shrub of the stability of a deep root system. If you do amend the soil that will fill the hole, use top quality fully mature compost.

Using Compost as Mulch or Top Dressing

Gardeners and landscapers use compost as mulch to suppress weeds, to keep plant roots cool and moist, to conserve water, to maintain a loose and porous soil surface and to prevent soil from eroding or compacting. Compost serves all of these purposes and also gives plantings an attractive, natural appearance. Compost can be used to mulch around flower and vegetable plants, shrubs and trees. Screened compost can also be used in thin layers as top dressing for turf or ground covers.

Prepare areas for mulching by clearing away any grass or weeds that might grow up through mulch. Remove the roots and shoots of weedy plants that spread vegetatively, such as Bermuda grass and ivy.

Different types of plants benefit from varying applications rates and types of mulch. Generally, finely screened compost should be used in layers less than 2 inches thick to allow air and water to penetrate to the soil and roots. Coarse compost may be applied in layers up to 4 inches thick. The general rule of thumb is that the finer the compost, the thinner the mulch layer.

Compost can also be used as a top dressing, in which case a thin layer of fine compost is placed on the surface of the soil or lawn to serve as a source of nutrients.

Mulching On Flower and Vegetable Beds:

- Apply 1/2 to 1 inch of compost over the entire bed, or place rings around each plant that extend as far as its outermost leaves.
- Always keep mulches a few inches away from the base of the plant to prevent damage by insects or disease.

Top Dressing on Lawns:

- Use screened commercial compost, or sift homemade compost through a 1/2 inch or finer mesh. Mix with an equal amount of sand or sandy soil. Add bone meal for additional nutrients.
- Spread compost/sand mix in 1/4 to 1/2 inch layers after thatching or coring and before reseeding.

Mulching Around Trees and Shrubs:

- Spread to a depth of 3-4 inches for best weed control.
- Keep mulches a few inches away from the base of the tree or shrub to prevent damage by insects or disease.

Top Dressing on Houseplants

- Scratch 1 inch of compost into the surface of the potting mix, once or twice a year.

Using Compost in Potting Mixes

Sifted compost can be used to make a rich, loose potting soil for patio planters, houseplants or starting seedlings in flats. Compost can be used to enrich purchased potting mixes or make your own.

Plants growing in containers are entirely reliant on the water and nutrients that you provide and those that are provided in the potting mix. Compost is excellent for container mixes because it stores moisture effectively and provides a variety of nutrients not typically supplied in commercial fertilizers or soil free potting mixes. Vermicompost is particularly valuable in a potting mix because of its fine texture and because it has more microbial activity than yard waste composts.

For Starting Seedlings:

- Sift compost through a 1/2 inch or smaller mesh.
- Mix 1 part sifted compost, 1 part fine sand, and 2 parts garden soil.
- Let age if you are concerned about the maturity of the compost.
- Use compost tea when true leaves emerge.

For Larger Container & House Plants:

- Mix equal parts loamy soil, sand and compost. Add blood meal, cottonseed meal, rock phosphate and kelp meal for additional nutrients.

Where to Buy Compost

By the Bag

Bagged compost is available at all garden centers. Locally, Glaum Egg Ranch produces a chicken manure product that is available by the bag. Sunland Garden Products, a Watsonville company, produces One Earth Compost which is distributed through Orchard Supply Hardware stores. It is made from mushroom compost and yard trimmings.

By the Truckload

If you can pick up a truckload of compost, you can get compost much cheaper. Landscape supply yards usually carry compost. You can also buy direct from compost producers.

Organic Materials Exchange, www.omexchange.org, lists a variety of compost suppliers.

For more bulk suppliers order the publication Soil Amendments for Agriculture and Landscaping from the website.

..... **Learn more about composting**
..... **on-line at**

www.compostsantacruzcounty.org

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