



## **COMPOST & MULCH:**

*What, Why, How Much and Where to Get Compost!*

### **What is Compost?**

Compost is a stable, humus-rich product resulting from aerobic microorganism decomposition of organic matter. Four feedstock types (biosolids, food scraps, green material, and manure) can be composted. Compost that has been composted to completion, called "mature", has a rich earthy texture and odor. Compost contains 40-60% organic matter. The organic matter is the only food for the soil organisms, that in turn provide nutrients to the plants in the organic growing system. The addition of compost to the soil will improve any soil's physical, chemical and biological properties; yielding healthier soil, plants, turf grass, trees and shrubs, helping to reduce project costs. Compost is a great source of Soil Organic Matter, which offers a variety of benefits proclaimed by university research, actual field use and even regulatory agencies.



### **How is Compost Made?**

Compost can be made in your backyard, or it can be made in commercial or municipal compost production facilities. The manufacture of compost is fully scalable from a worm bin stored under your sink (a few pounds), to back yard compost (up to a ton), to on farm compost (100's of tons) to large facilities (100's of thousands of tons per year). Composting is a natural degradation process that occurs with all organic matter deposited in nature (e.g. fallen leaves). However, as the piles get bigger, the energy produced by the decomposing organisms, and cause compost piles to heat up, and microorganisms that love the high temperatures (thermophilic) cause the decomposition rate to speed up as much as 25 times, the rate of small, room temperature compost piles. So large compost operations can produce a lot more compost in a much shorter time. Compost piles must be turned regularly to aerate them (this keeps the microbes using air (O<sub>2</sub>) and producing CO<sub>2</sub>). Without air (anaerobic) compost is oxygen starved and produces methane (CH<sub>4</sub>), a powerful, unwanted, greenhouse gas.



**Backyard Compost Bin**



**Manual Turning**



**Industrial Compost Facility**



**Mechanical Windrow Turner**

### **What is Mulch?**

Technically, mulch any material used to cover soil. So it can be made from organic debris (compost, wood chips, leaf litter, etc.) or inorganic materials such as plastic, gravel, rocks, etc. Organic soil cover that mulches provide protects the soil and plant roots from temperature change, keeps moisture in, by slowing evaporation from the surface of the soil. It also keeps weeds from sprouting by reducing sunlight penetration to the soil surface.



**Bark Mulch**



**Wood Chips**

## Why Use Compost?

Compost is a biologically produced product that is the foundation for creating a renewable sustainable local economy, literally, from the ground up.

### Compost is:

- **Local:** a locally produced and used, natural, green product
- **Beautiful Healthy Plants:** a health soil builder, making landscapes plants more beautiful, and farm lands more productive
- **Water Conservation:** a reducer of water consumption in landscapes and agriculture by 30%, on average. This is BIG since 90% of California's water resources are used to grow plants (ag and landscapes).
- **Stormwater Management:** an EPA approved best management practice for managing stormwater and controlling erosion
- **Landfill Extension:** keeping organics out of landfills, extending the life of the landfills
- **Green Jobs:** a builder of the entire "green industry", a creator of local green jobs in landscape and agriculture, starting with building healthy soil, key to growing anything
- **Renewable Product:** a renewable biologically based product
- **GHG Reduction & Sequestration:** eliminating landfill methane and diverted organics build healthy soil
- **Organic:** reducing pesticide, herbicide and synthetic fertilizer use, and thus reducing environmental impacts.
- **Healthy Soil:** providing all of these benefits to people and the environment
- **Cost Effective:** capable of reducing costs and providing multiple in all the above areas.



## How Much Do I Need?

While you can't have too much compost, it has been shown that 5% organic matter in the soil is sufficient to produce all the above benefits. It's possible to grow healthy plants directly in compost, as long as it is mature and contains enough fertilizer (e.g. with organic fertilizers or compost tea). Since compost is already ~50% organic matter, then adding 1.2" of compost to 12" of soil, will mean that the soil will now have at least 5% organic matter. This is a good rule to follow. See the "Compost Calculator" for how to build your soil to 5% or more organic matter using compost.



50% organic matter compost/soils growing vegetables in grow socks

## Should I Make or Buy My Compost?

Depending on how much compost you need for you landscaping project will likely determine whether you can make your own (takes a number of months), buy it in bags, or buy it in bulk

<b>MAKE IT:</b> Less than 5 cubic feet	<b>BUY IT IN BAGS</b> Between 5 and 25 Cubic Feet	<b>BUY IT BULK</b> More than 25 cubic feet or 1 Cubic Yard
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Need help buying compost? [www.buy-compost.com](http://www.buy-compost.com)

## On What Type of Projects Can I Use Compost?

**Sustainable Landscapes -**  
Convert your water inefficient landscape into a water conserving landscape. See your local Sustainable Landscape Program.

**Stormwater and Erosion Control**  
Compost is a standard best management practice for controlling stormwater runoff and reducing erosion of unprotected soils.

**Organic and Carbon Farming**  
Compost is the basis of organic farming for decades; and now it is the foundation ingredient for carbon farming and carbon ranching

