

The COMPOST-CARBON-CLIMATE Connection

Compost, made from a mixture of food and yard wastes that have been fully decomposed, is used for fertilizing and conditioning soil. Compost contains carbon, microorganisms, and nutrients. Carbon in the soil feeds underground microbial life, which helps grow healthy, resilient plants and crops. High-carbon soil is rich and black. It holds more water in dry times and allows less to run off during storms. By putting more carbon in the soil, we can pull more carbon out of the atmosphere and help stabilize the climate.

6 MILLION

Estimated amount of yard waste, food waste, biosolids, and agricultural materials handled by California's composting facilities in 2017. Food waste is about 5% of that throughput.

15 MILLION

Estimated amount of these same materials needed to be handled by California's composting infrastructure in 2025 to meet California's climate goals (SB 1383). Food waste would be about 25% of that throughput.

1.3 MILLION

Metric tons of carbon dioxide equivalents (MTCO₂e) of landfill methane that were avoided by composting in 2017. That's the equivalent to removing 280,000 average passenger cars from the road for a year.

3.8 MILLION

Reduction in MTCO₂e from avoided landfill methane if California's composting infrastructure expands enough to meet California's SB 1383 climate goals. Equivalent to removing 813,000 average passenger cars from the road for a year.



Photosynthesis:

is nature's way of taking carbon out of the air and storing it. Plants do not use all of the carbon they consume from the air. As much as half is pushed out through the roots in the form of "exudates," which the plant uses to attract and feed beneficial soil microbes.

Compost:

delivers fresh carbon and new microbes, jump-starting the process of building healthy soil.



Mulch:

is a layer of material spread over the surface of soil that protects the soil and its microbial life from sun, wind, and erosion. Organic mulches ultimately break down into, you guessed it, more soil carbon! Mulched soils help save water by reducing soil temperatures and slowing evaporation, so water stays in the plant zone longer.

Soil microorganisms:

(bacteria, protozoa, fungi etc.) feed on root exudates and deliver nutrients to plants. They also help leach minerals out of bedrock for use by plants, and they help protect plants from disease-causing organisms.



C = Carbon