



USCC Position: Keep Organics Out of Landfills!

The US Composting Council is firmly opposed to landfilling yard trimmings, food residuals and other source-separated organics when viable alternatives are available. Landfilling is an inefficient way to use our organic feedstocks: wasting resources, reducing recycling, and increasing greenhouse gas emissions.¹

There is a heightened awareness of the large impact of landfill-generated methane emissions, as the world focuses on mitigating and preventing the consequences of global climate change. Methane is 25 times more harmful as a greenhouse gas than carbon dioxide. Organic wastes decomposing in landfills account for 37% of manmade methane. But if landfills can capture that methane and use it as an energy source, why NOT put organic residuals like leaves, grass and other yard trimmings into them? HERE'S WHY!

1. Reduces Errant Emissions

New landfills are required to have methane collection systems since solid waste includes a significant organic component. Organic materials—comprised of yard trimmings, food scraps, wood waste, paper and paperboard products—are the largest component of our trash and make up about two-thirds of the solid waste stream. Old landfills are being retrofitted, and some are being tested as “bioreactors” where the methane production is optimized and used as an energy source. Not all the methane that will come from the organics decomposing in a landfill, however, can be collected.

While high fiber material like wood or paper might take years before reaching peak methane generation, rapidly decomposing “putrescible” wastes, like grass clippings or food scraps, often start generating methane within a few days or weeks. Much of this methane can be lost to the atmosphere. **The USEPA**

estimates that over the life of a landfill, 25% of the methane generated in a landfill with gas collection will escape (USEPA, 2007). Some advocates of bioreactors put that number as low as 10%, while some critics put it as high as 80%. The overall efficiency of the methane collection will vary depending on many factors including the waste composition, the climate and the management of the landfill. By endeavoring to put more organic wastes in a landfill in order to increase methane production, a bioreactor landfill may actually be emitting more methane than its conventional counterpart, especially in the near term.

2. Avoids Methane Generation with Composting

Organic wastes do not contain methane. It is only when they are placed in an anaerobic environment that methane is produced. They will generate very little, if any methane, if they are recycled through composting. The US EPA has concluded that the greenhouse gas emissions from composting stem from the energy used to manage the operations, not from the composting process itself. (USEPA, 2006b)

3. Saves More Space

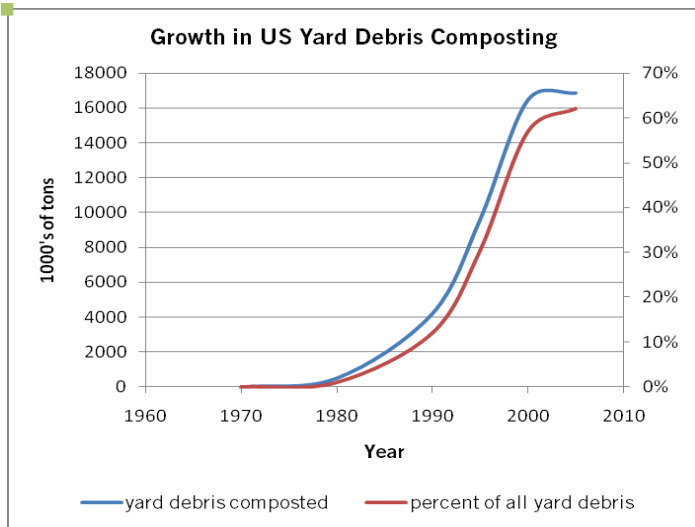
Putting more organics in landfills consumes valuable landfill space, even if the decomposition of those organics is accelerated in order to produce methane for energy production. By sending the organics to reuse or recycling space is saved at the landfill, and society gets the most benefit from its materials.

4. Recycling is Better

The US Environmental Protection Agency’s “Waste Management Hierarchy” puts landfilling as the last resort, after reuse, recycling and energy extraction. Composting is recycling when these materials are used in the manufacture of something new and valuable. Whether it’s converting wood pallets to landscape mulch or transforming leaves and grass to humus-rich compost, recycling of organic “wastes” makes sense and creates products of real value.

According to the EPA, “Reducing, reusing, recycling, and rebuying—the four “Rs”—is key to diverting organic materials from landfills or incinerators and protecting human health and our land, air, and water. Waste reduction and recycling prevents greenhouse gas emissions, reduces pollutants, saves energy, conserves resources and reduces the need for new disposal facilities...Yard trimmings and food residuals by themselves constitute 24 percent of the U.S. municipal solid waste stream... Composting offers the obvious benefits of resource efficiency and creating a useful product.” (USEPA, 2006a).

¹ For an expanded version of this Position Statement, go to <http://compostingcouncil.org/advocacy-resource-materials/>



The products of composting and mulch production have many environmental benefits: Compost is widely used as a soil amendment in residential and commercial landscaping for its ability to improve the physical, chemical and biological properties of the soil, leading to healthier plants. It has gained wide acceptance in the development and construction fields for its role in erosion control and stormwater management. Increasing soil organic matter levels in soils (i.e., compost) can improve drought tolerance and water conservation as well as reduce atmospheric CO₂ levels that contribute to climate change. The list of applications and the understanding of the uses and benefits of compost use continues to grow.²

Advocates of putting yard debris in landfills claim that landfills are a source of “green energy”. Yet less than a third of the leaf and branch material put in a landfill biodegrades, so most of it never produces methane at all. The compost made from the same leaves and branches would contain large amounts of organic carbon, rich in “biological energy”, which can fuel critical ecosystem functions, such as soil building and nutrient cycling. The opportunity to utilize this biological energy is lost for those organic materials that are buried in landfills – the use of landfill gas to produce renewable energy only partially recovers some of this value.

5. Towards a Sustainable Future

Despite the well-recognized value of compost for improving the environmental sustainability of our gardens, yards, parks, cropland and forests, the economics of composting may not always be favorable as we transition away from common waste management practices. Composting operations can incur significant development and operating costs. Economic viability of composting operations is

essential if they are to be sustainable. These facilities must be properly designed, operated, and monitored if diversion is truly going to be a success. **It will require regulatory and public support to discourage unnecessary landfilling and promote the use of composting.** Those supports come in two basic forms:

- 1) financial: those that increase the cost of alternatives or reduce the cost of organics collection or processing, and
- 2) directive: those that guide feedstocks towards composting.

Of the latter, direct bans on landfilling some or all yard trimmings have been most effective, followed by stating recycling goals that can only be realistically met by composting yard trimmings. More recently, innovative market-based incentives, such as “carbon credits”, have been proposed to stimulate the recycling of organic residuals without the need for additional mandates.

Currently there are 25 states that ban some fashion of organics disposal in landfills, mostly leaves, grass and other yard debris.

Thanks in part to the bans that have been in place we have made remarkable strides towards recycling these materials. We now recover 20% through composting, including 62% of all yard trimmings, compared to 2% in 1990. The modern composting industry is barely 30 years old. Market demand is still relatively immature; it will grow. At that point the regulatory support may become unnecessary. For now though, we need to keep the bans, goals and other policies in place and not allow yard trimmings to end up in landfills, bioreactor or otherwise. The path to a sustainable society may be long and difficult, but composting organics is clearly a step in the right direction.

USEPA, 2006a, Municipal Solid Waste in the United States: 2005 Facts and Figures. US Environmental Protection Agency, Washington, DC

USEPA, 2006b, Solid Waste Management and Greenhouse Gases, US Environmental Protection Agency, Washington, DC

USEPA, 2007, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2005, USEPA #430-R-07-002, US Environmental Protection Agency, Washington, DC

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² For more info on compost benefits, go to compostingcouncil.org/factsheets-and-free-reports/

About the USCC: The United States Composting Council (USCC) is a national not-for-profit organization dedicated to the development, expansion and promotion of the composting industry. For more information visit www.compostingcouncil.org