

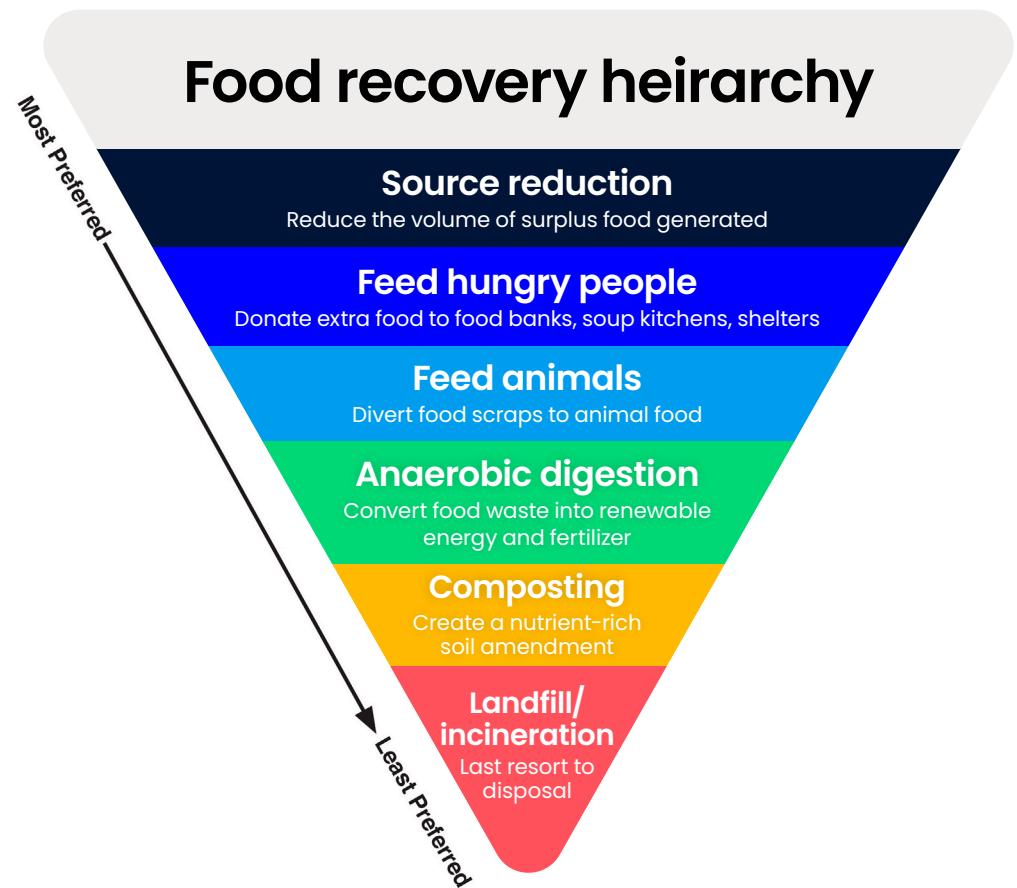
# Organic waste management solutions



## Comparative fact sheet

Businesses in the US are increasingly exploring innovative organic waste management solutions, driven by a variety of motivations. These range from proactive initiatives aimed at capitalizing on tax incentives for sustainable alternatives to reactive responses prompted by the passing of new organic waste bans by states and municipalities toward USDA & EPA's goal to reduce food waste by half by 2030. A clear indicator of this is the global venture capital investment into the food waste space, which grew to \$2.17B in 2020, equal to the combined total investment of the three years prior, according to Pitchbook data.

Regardless of the driving force behind organizational shifts in food waste management practices, the available choices, after reduction and recovery, have historically been limited to composting and landfills due to their accessibility. Chomp gives organizations a better and sustainable alternative with on-site anaerobic digestion. This fact sheet is designed to streamline information for your organization, outlining the main distinctions among the three primary organic waste management solutions: onsite anaerobic digestion, landfills, and composting.



	Emissions	Return on investment	Pros	Cons
 <b>Onsite anaerobic digestion</b>	<p>Low greenhouse gas emissions due to controlled digestion process. Biogas captured can be used as a renewable energy source on-site, avoiding the life cycle emissions associated with the processing, delivery, and combustion of conventional fossil fuels.</p>	<p>Moderate to high, depending on feedstock, energy sales, and by-products.</p>	<ul style="list-style-type: none"> <li>- Tax incentives &amp; carbon credits</li> <li>- Generates renewable energy</li> <li>- Reduces landfill waste</li> <li>- Creates nutrient-rich biofertilizer</li> <li>- Minimal odors &amp; visual impact</li> <li>- Promotes local, circular economies</li> </ul>	<ul style="list-style-type: none"> <li>- Initial capital investment</li> <li>- Requires an operator</li> <li>- Space and infrastructure demands</li> </ul>
<b>Landfilling</b>	<p>High methane emissions due to anaerobic decomposition.</p>	<p>No ROI. Landfill operations are cost intensive. (Gas recovery-to-energy projects, where suited, can generate income to offset costs, but are capital intensive.)</p>	<ul style="list-style-type: none"> <li>- Simple waste disposal method</li> <li>- Low upfront costs</li> </ul>	<ul style="list-style-type: none"> <li>- High methane emissions contribute to climate change</li> <li>- Does not comply with organic waste bans</li> <li>- Space-intensive and limited land availability</li> <li>- Environmental contamination risks</li> <li>- Limited waste diversion and resource recovery</li> </ul>
<b>Composting</b>	<p>Low emissions during aerobic decomposition.</p>	<p>Low to moderate, depending on scale and market for compost.</p>	<ul style="list-style-type: none"> <li>- Produces carbon- and nutrient-rich compost for soil enhancement</li> <li>- Reduces landfill waste</li> <li>- Supports sustainable agriculture</li> </ul>	<ul style="list-style-type: none"> <li>- Longer decomposition time period than anaerobic digestion</li> <li>- Odor and space concerns if not managed properly</li> <li>- No energy generation</li> </ul>

# Key takeaways

## Emissions

On-site anaerobic digestion and off-site anaerobic digestion offer lower greenhouse gas emissions than landfilling. Composting also has relatively low emissions.

## ROI

On-site anaerobic digestion offers potential for higher returns than other pathways through energy use or sales and revenue generated by by-products sales. Landfilling has low upfront costs but lacks significant financial benefits.

## Pros

Anaerobic digestion solutions generate renewable energy and nutrient-rich by-products, reducing landfill waste while supporting regenerative agricultural practices. Composting similarly supports soil health and sustainable agriculture.

## Cons

On-site anaerobic digestion requires up front investment but tax incentives can reduce CAPEX by 30-50%. Landfilling contributes to high methane emissions and environmental risks. Composting has longer decomposition periods and limited energy generation potential.



Choosing the most suitable solution depends on factors such as waste composition, available resources, use of energy, local regulations, and long-term sustainability goals. Balancing environmental benefits, financial viability, and operational considerations for your business is crucial for effective organic waste management.

Chomp specializes in onsite anaerobic digestion solutions purpose-built for communities of 500 to 100,000 people with organic waste volumes between 25 and 4,500 tons per year, such as campuses, food processing units, supermarkets, utilities, and residential communities.