Bren School of Environmental Science & Management, University of California, Santa Barbara

rubbish

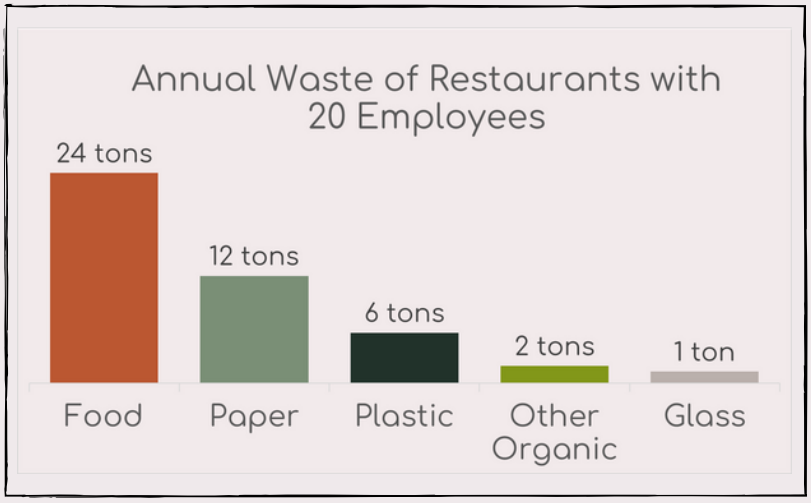
rubbish collects food and dog waste streams from local neighborhoods to produce dispatchable, renewable energy and high-quality compost.

The Problem

Our current food systems are wasteful and disconnected. Nowhere is that better illustrated than in food waste disposal practices. Despite efforts to recover food and reduce waste, the food retail, food wholesale, and hospitality sectors together produced nearly 31 million tons of food waste in the United States in 2018. Over 44% of that food waste—or about 14 million tons—was sent to landfill. Why is this a problem? First, it puts unnecessary pressure on the limited capacity of landfills. Second, the landfilling of food waste generates methane, a potent greenhouse gas.

"31 million tons of organic waste is generated in the food sector annually."

~ EPA, 2020



Despite food waste recovery efforts, 44% of food waste is still being diverted to landfills

Food retailers struggle to meet stringent food diversion requirements due to cost and operational feasibility

Landfills account for 17% of the total methane emissions generated annually in the U.S.

Contact

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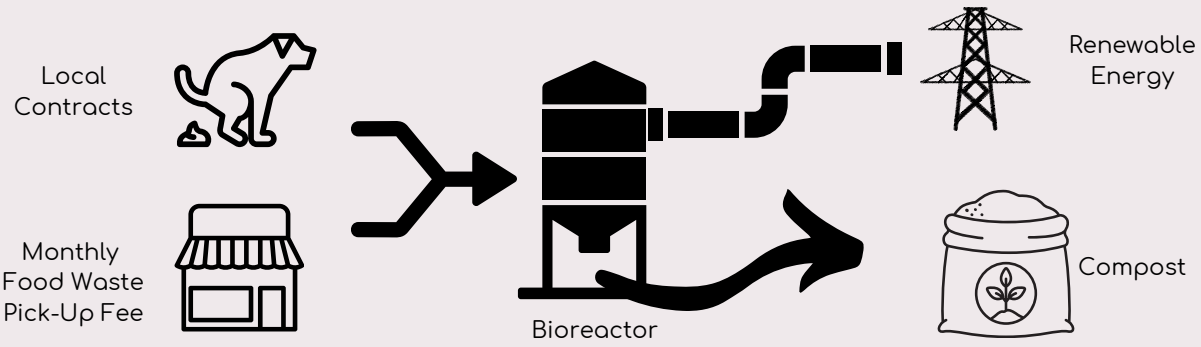
There's no such thing as waste, that's just rubbish.

The rubbish Solution

rubbish solves this problem using two neglected organic waste streams--food waste from small food retailers and dog waste--to produce renewable energy and high-quality compost. Our approach's by-products help lower our operation cost, savings we pass on to our small business customers. We stand apart from our competitors by offering a "charge-by-weight" waste collection service and "track-and-trace" of their waste. This process also provides small businesses with a holistic narrative connecting their food business back to the land that their food comes from.

How We Operate

At the heart of rubbish is the community, but the gut of rubbish is the bioreactor technology that performs anaerobic digestion. During anaerobic digestion, microbes need macronutrients for energy and micronutrients for essential minerals. Food waste can provide macronutrients but is limited by micronutrients resulting in suboptimal energy yield. We decided that dog waste could serve as a potential micronutrient source based on our small-and-medium-sized business customers' desires for community engagement. Incorporating dog waste as a digester feedstock can maximize biogas potential while solving the public and environmental health issues associated with mismanaged dog waste streams.



Why rubbish?

Our combined serviceable markets for organic waste management and compost are valued at over $1.8 Billion

"Charge-by-weight" waste collection services empowers our customers to reduce waste and save on costs

co-digestion with dog waste increases energy production by 16%, while serving our neighborhoods more holistically