

THE WISDOM OF CROWDS

Understanding the Environmental Benefits and Footprint of Food Waste Disposers

When John Hammes invented the food waste disposer in his garage in 1927, he had one thought in mind: to make kitchen clean-up easier for his wife. In that era, only Teddy Roosevelt and John Muir were well-known as “environmentalists.” Most residential waste was burned or buried, and modern sewer systems and wastewater treatment were at early stages of development. In fact, an early marketing challenge was convincing municipal officials that pulverized food waste would not clog sewers.

In today’s world, food waste disposers can now be considered an environmental appliance – much like *EnergyStar*-rated refrigerators and laundry machines. Acknowledging the “wisdom of crowds,” disposers are now approved for sale in over 80 countries – based on decades of research and widespread use that support the essential role disposers play in diverting food waste from collection trucks, landfills and incinerators. Thousands of municipalities have decided that capturing food waste through sewers and wastewater treatment plants through which it is processed into biosolids for compost-quality soil improvement on agricultural lands is far preferable to managing food waste along with other garbage.

These key facts about food waste, and food waste disposers, helped to inform those decisions:

Food waste characteristics:

- ❖ Food waste ranges from 15% to 20% of residential waste. (Materials generally designated for recycling programs average 35% to 40%.)
- ❖ Food waste averages 70% water, similar to human waste and the human body.
- ❖ The chemical composition of food waste is comparable to human waste.

Food waste collected as solid waste:

- ❖ Is stored in homes and buildings prior to collection.
- ❖ Generally ends up in trucks, transfer stations, landfills and incinerators.
- ❖ Causes odors, vermin and other noxious problems – as well as fuel and truck emissions to transport.

- ❖ In incinerators, little energy is captured due to the high water content of food waste.
- ❖ In landfills, food waste decomposes, creating both leachate (toxic liquid) and methane (a gas that contributes to global warming).
- ❖ Very little residential food waste is composted, either in backyards, worm-bins or through small-scale municipal efforts – which requires more advanced technology than yard waste, with feedstock, siting, odor-control and cost challenges.

Food waste pulverized through a food waste disposer and collected through sewers:

- ❖ Requires very little electricity and extra water to pulverize.
- ❖ Easily transports underground, using water to carry waste particles through sewer pipes.
- ❖ Effectively removed at wastewater treatment plants.
- ❖ Efficiently processed along with human waste.
- ❖ Beneficially reused in fertilizer products – including some marketed directly to consumers – all of which is carefully regulated by federal and state laws.

Nearly all of the above also is true with respect to food waste disposers in a septic-tank system, as well as food waste generated by commercial and institutional facilities (e.g., restaurants, cafeterias and food markets).

Food waste disposers themselves create a modest environmental footprint; they are durable and long-lasting, require essentially no maintenance, and – composed primarily of metal – can be recycled at the end of their useful life.

While generating less food waste is good – and large-scale generators of food waste merit large-scale composting efforts – it is estimated that as much food waste in the U.S. is converted to biosolids as is landfilled. In Europe, bans on landfilling organic waste are being imposed, stimulating great interest in expanded use of disposers to solve this critical environmental challenge.

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benefits.

