ENVIRONMENTAL RESEARCH & EDUCATION FOUNDATION™
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EXECUTIVE SUMMARY

COMPOSTING STATE OF PRACTICE: RESULTS FROM A NATIONAL OPERATIONS SURVEY

PUBLISHED 2024

KEY FINDINGS

- **Facilities are being built with larger design capacities and tonnage processed has increased.**
- **Facilities generate revenue from multiple sources but large facilities are much more likely to generate revenue from tipping fees.**
- **Yard waste is the most commonly processed feedstock but only brings in around $40/ton. Food waste brings in one of the highest tipping fees at about $50/ton and is the second highest feedstock accepted.**
- **Larger facilities require fewer staff and pieces of equipment compared to medium sized facilities indicating efficiencies can be gained operating facilities of a certain scale.**

*The information presented in this document is based on a survey carried out in 2022 that had over three hundred responses across forty-seven states to learn about the facilities, operations, and obstacles faced by composters.

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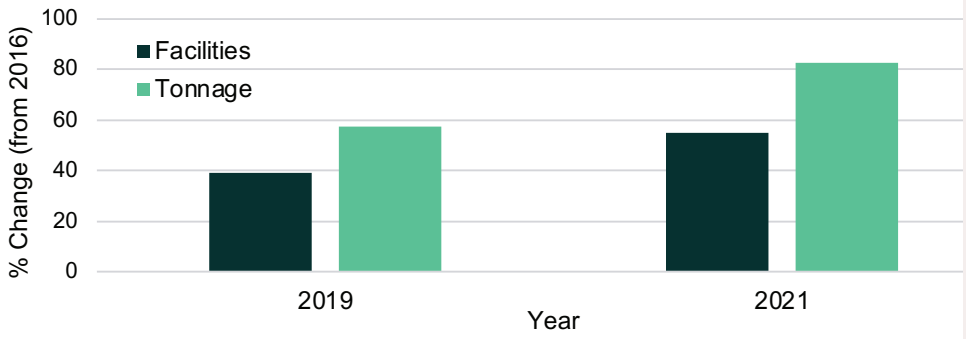
EREF's *Composting State of Practice: Results from a National Operations Survey* explores composting trends across the country. The availability of information about the number and types of compost facilities operating in the U.S. is limited. With no national database and mixed availability of state data, tracking changes in available infrastructure is difficult. Given this, one of the goals of EREF's study was to generate information about the number and types of facilities, types of feedstocks being processed, and the economics of operating facilities in the U.S.

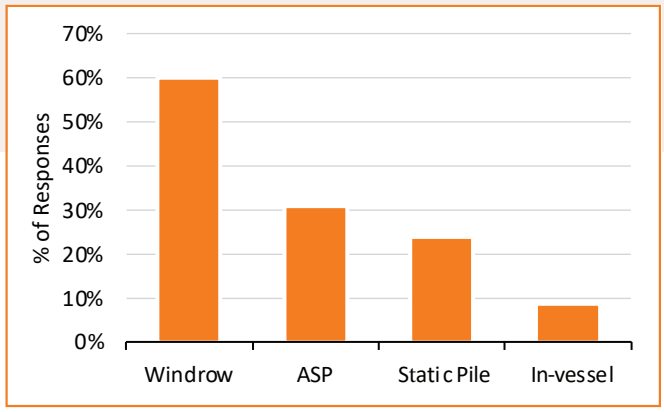


Newer facilities are being built with larger design capacities. Between 2019 and 2021, the tonnage processed increased faster than the number of facilities.

Types of Compost Facilities

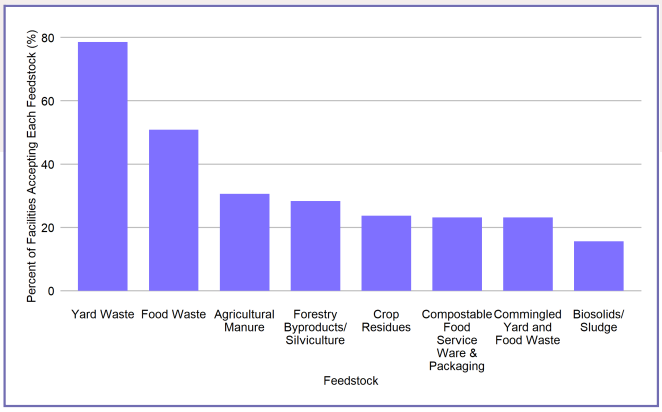
The four main methods of composting used within the U.S. to aerobically break down organics into finished compost are windrow, aerated static pile (ASP), static pile (not actively aerated), and in-vessel systems.

The most common composting method was windrow with 60% of surveyed facilities using this method. ASP was the second most common method, with 31% using this method.



Feedstock Types and Sources

Of the 8 different feedstocks evaluated, yard waste and food waste were the most commonly accepted organics, with 79% and 51% of facilities accepting these feedstocks, respectively. This was followed by animal manure and forestry byproducts. Almost one-third of facilities only accept one type of feedstock. Food waste and yard waste are the most common combination of accepted feedstocks, followed by yard waste and forestry byproducts.



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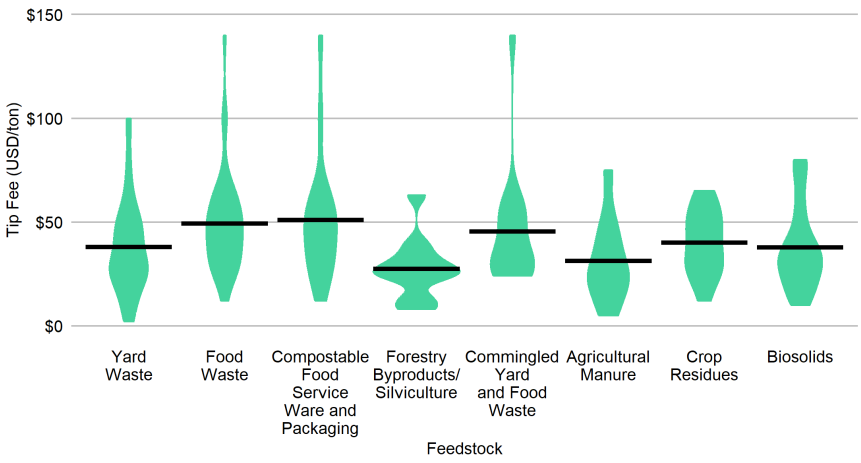
The Economics of Composting: Employees, Equipment, Tipping Fees, and Markets

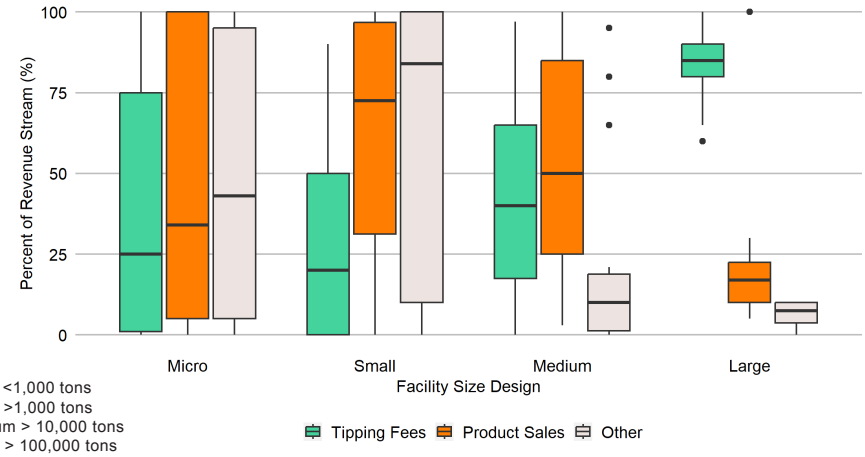
Tipping Fees

Food waste had one of the highest average tipping fees, similar to compostable packaging, around 50 $/ton. Food waste, compostable packaging, food service ware, and commingled yard- and food waste had a few facilities that charged over 100 $/ton for certain feedstocks, but most facilities cap tip fees around $75.



Markets

Large facilities were more likely to rely on tipping fees as the major source of their revenue, whereas smaller facilities relied on a more diversified revenue stream. The top market by weight was agricultural markets, and the top market by number was landscape markets. Retail markets were the second most common market by number but only contributed to 7% of sales by weight.



Micro <1,000 tons
Small >1,000 tons
Medium > 10,000 tons
Large > 100,000 tons

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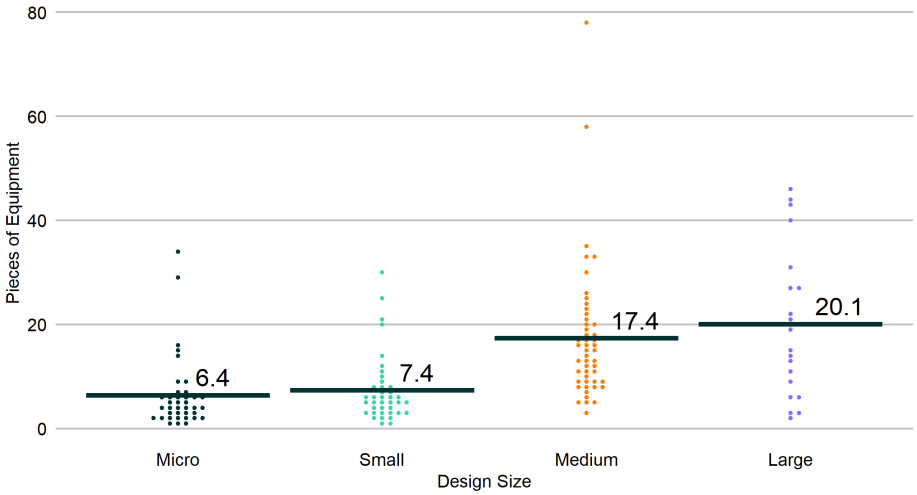
Employees

The overall average number of employees at facilities was 7.44. The number of employees at a composting facility will vary based on the size and type of facility; however, as facilities increase in size, they require fewer employees per 10,000 tons of compost produced.

Design Size	Minimum	Maximum	Average	Employees per 10,000 tons
Micro (<1,000 tons)	1	8	2.18	N/A
Small (>1,000 tons)	1	12	3.44	12.4
Medium (>10,000 tons)	1	85	10.51	4.8
Large (>150,000 tons)	1	84	21.75	2.9

Equipment

For composting equipment used, the number of pieces of equipment increased with a facility's design capacity. Similar to employees, the average number of pieces of equipment was only slightly larger at large facilities compared to medium facilities, suggesting there could be some economies of scale achieved as facilities process more material.



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