Organics and Foodservice Packaging Composting Infrastructure in the U.S. and Canada

The Overview
Research Overview

• PURPOSE
  • Assess and inventory North American commercial source-separated organics composting facilities for residential and business generators
  • Identify composters willing and able to accept food scraps and compostable packaging materials

• APPROACH
  • RRS researched over 400 compost facilities in North America between August and October 2017
    • Surveyed facilities directly via phone call or email
    • Gathered data from additional facilities via web research

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Composters Targeted

• NORTH AMERICAN COMPOSTERS THAT ACCEPT FOOD SCRAPS
  • Compiled list of facilities from RRS database and corroborated with external sources
  • Briefly researched and selected facilities that were most likely to accept food scraps and were operational

• VARIOUS FACILITY TYPES
  • Municipal/County/Provincial
  • Commercial facilities
  • Institutional, including universities and correctional facilities
  • Agricultural/Farm facilities
Results
Incoming Materials

Composters most frequently noted that food waste makes up 25% or less of the material they process, and most process very little to no FSP.

Facilities’ Food Waste Processed as % All Material Received

- 0-25% Food Waste: 29%
- 25%-50% Food Waste: 19%
- 50%-75% Food Waste: 7%
- 75%-100% Food Waste: 19%
- None Accepted: 6%

Facilities’ Compostable Packaging Processed as % of All Material

- 0.1-2% Packaging: 38%
- 2-5% Packaging: 8%
- >5% Packaging: 6%

n=204, n=221
Windrow technologies were most common among all surveyed facilities, as well as those accepting FSP.

Technology Used by Surveyed Facilities

- Windrow: 51%
- ASP: 15%
- In-Vessel: 11%
- Other/Unknown: 23%

n=315

Technology Used by FSP-Accepting Facilities

- Windrow: 56%
- ASP: 20%
- In-Vessel: 1%
- Other/Unknown: 23%

n=134
Of composters that use in-vessel or multiple processing technologies and indicated what types of compostable packaging they accept, >50% will take both paper and plastic FSP. In contrast, more than half of those that use ASP or windrow technologies do not accept compostable packaging at all.
Surveyed composters most commonly accept material from residential sources, and 10 to 50 miles is the most common distance from an incoming source to the facility.

### Sources of Incoming Material

<table>
<thead>
<tr>
<th>Source</th>
<th>Percent of Composters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>73%</td>
</tr>
<tr>
<td>Commercial</td>
<td>66%</td>
</tr>
<tr>
<td>Institutional</td>
<td>35%</td>
</tr>
</tbody>
</table>

### Distance from Source to Facility

<table>
<thead>
<tr>
<th>Distance</th>
<th>Percent of Composters</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-site only</td>
<td>14%</td>
</tr>
<tr>
<td>&lt;10 miles</td>
<td>9%</td>
</tr>
<tr>
<td>Up to 50 miles</td>
<td>32%</td>
</tr>
<tr>
<td>Up to 100 miles</td>
<td>14%</td>
</tr>
<tr>
<td>&gt;100 miles</td>
<td>3%</td>
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</tbody>
</table>
The majority of composters accept all types of food waste. Additionally, food waste acceptance is not usually limited by whether the food is pre- or post-consumer.

Types of Food Waste Accepted

- Not Accepted: 9%
- Fruit/Veg Only: 17%
- All Food Waste: 74%

Pre- and Post-Consumer Food Waste Acceptance

- Not Accepted: 8%
- Pre-consumer Only: 11%
- Post-consumer Only: 13%
- Pre- and Post-consumer: 68%
The most commonly accepted compostable packaging types are compostable plastic bags, uncoated food-soiled paper and paper bags.

Other types for which acceptance was measured include:

- Compostable plastic cups/plates
- Compostable plastic cutlery
- Corrugated boxes
- Molded fiber containers
- PE coated food-soiled paper
- PLA coated food-soiled paper
Composters that accept compostable products most often accept both paper and plastic types of products.

<table>
<thead>
<tr>
<th>Compostable Product Material Type</th>
<th>Percent of Composters that Accept Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>44%</td>
</tr>
<tr>
<td>Paper and Plastic</td>
<td>31%</td>
</tr>
<tr>
<td>Paper only</td>
<td>16%</td>
</tr>
<tr>
<td>Plastic only</td>
<td>2%</td>
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</tbody>
</table>
Materials Acceptance: Requirements

• BPI certification and meeting ASTM standards were the most common requirements for facilities to accept compostable packaging.

• Acceptance requirements vary widely among facilities, with no strong geographic trend.
Many composters that accept no or paper-only compostable packaging are located in the northeastern US/eastern Canada, but otherwise there are no strong trends between types of compostable packaging accepted, amount of incoming material and geography.
Complete study results, including a spreadsheet with all the data collected during this study, are available only to members of FPI’s Paper Recovery Alliance and Plastics Recovery Group.

To learn more, please contact Lynn Dyer at ldyer@fpi.org.