

## Introduction

The Ohio Grocers Association (OGA) and the Ohio Grocers Foundation (OGF) partnered with the Ohio Department of Natural Resources (ODNR) to create this Composting and Diversion Guide for the Ohio supermarket sector. The Guide provides a format for corporate leaders, store owners and managers to develop and implement an effective food waste collection program.

Up to 60-75% of most supermarket waste [after recycling old corrugated containers (OCC) and plastics], is comprised of biodegradable materials including discarded food, waxed and wet cardboard, paper, and meat renderings. These biodegradable materials can be composted. Composting is a form of recycling, whereby biodegradable materials are separated from trash and sent to a composting facility to be processed into a valuable soil-like product called compost.

Recycling of organic (biodegradable) materials has the potential to save the supermarket money while conserving valuable natural resources and scarce landfill space. Not only is there the potential for economic savings, but also the potential to build a positive public relations image...composting and diversion programs address an increasing public concern for environmental quality.

This Composting and Diversion Guide was developed after a pilot composting project was implemented with several stores in Ohio. We want to thank the following Ohio Grocers Association member stores for participating in the pilot program: Kroger implemented a pilot program from July – October 2008 and Bassett’s Market, Dorothy Lane Markets, Fresh Encounter, Giant Eagle, Howard’s IGA, and The Hills Market all participated by completing the initial assessment phase. We also want to thank the composting facilities for working with us: Barnes Nursery and Garick Corporation – Paygro.

Also, a special thanks to John Connolly, our consultant from JFConnolly and Associates. John has implemented successful composting strategies across the country and we leveraged his expertise in Ohio.



# Composting and Diversion Guide

This Guide was developed with grant funding from the Ohio Department of Natural Resources (ODNR)



Ohio Department of Natural Resources  
Division of Recycling and Litter Prevention  
2045 Morse Road, Building C-2  
Columbus, OH 43229-6693



Ohio Grocers Association  
Ohio Grocers Foundation  
1335 Dublin Road, Suite 30A  
Columbus, OH 43215

January 2009

## **Table of Contents**

<b>Introduction.....</b>	<b>1</b>
<b>Food Waste Recovery.....</b>	<b>4</b>
<b>Getting Started.....</b>	<b>5-6</b>
<b>Collection.....</b>	<b>7-8</b>
<b>Container Options.....</b>	<b>9-10</b>
<b>Examples of Collection Containers.....</b>	<b>11</b>
<b>Training Tools.....</b>	<b>12</b>
<b>Sample Letter to Associates.....</b>	<b>13</b>
<b>Sample Letter to Vendors.....</b>	<b>14</b>
<b>Training Tools for Managers and Associates.....</b>	<b>15-16</b>
<b>Store Fact Sheet.....</b>	<b>17</b>
<b>Questions and Answers Handout.....</b>	<b>18-19</b>
<b>Training Exercise.....</b>	<b>20</b>
<b>Department Guidelines.....</b>	<b>21-28</b>
<b>Monitoring.....</b>	<b>29</b>
<b>Resources.....</b>	<b>30-31</b>

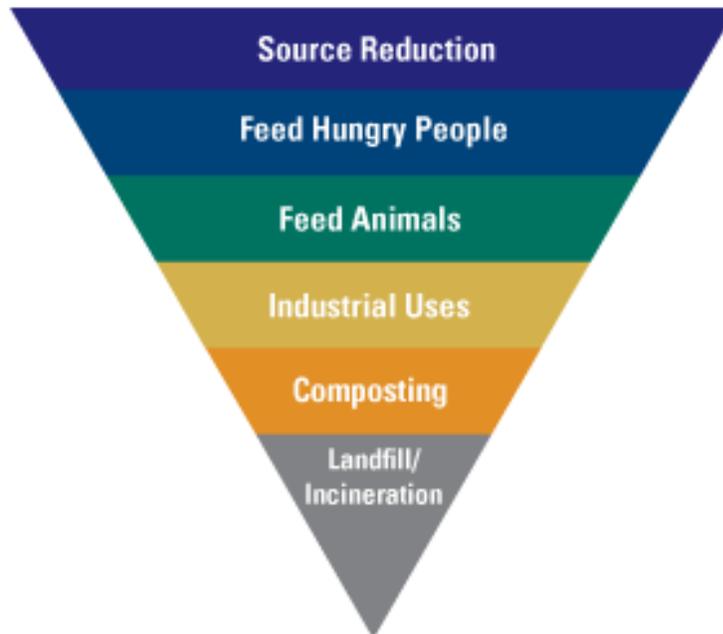
## Food Waste Recovery

The Ohio Grocers Association and the Ohio Grocers Foundation believe that excess food waste should be put to productive use, and we recommend following the Food Waste Recovery Hierarchy from the United States Environmental Protection Agency (U.S. EPA).

The Hierarchy is:

1. Source Reduction – Reduce the volume of food waste generated
2. Feed Hungry People – Donate extra food to food banks, soup kitchens and shelters
3. Feed Animals – Divert food scraps to animal feed
4. Industrial Uses – Provide waste oils for rendering and fuel conversion; and food scraps for digestion to recover energy
5. Composting – create a nutrient-rich soil amendment
6. Landfill/Incineration – last resort for disposal

You can find the information on the U.S. EPA website at <http://www.epa.gov/organicmaterials/fd-hier.htm>.



## Getting Started

### Steps in Implementing a Composting Program

1. Appoint a program manager who will oversee the composting program in your store(s). The program manager will be responsible for monitoring all composting activities, training new associates, retraining associates, and regularly reporting the results of the composting program to store associates. (This program manager may be the store manager, produce manager, etc.) Grocery store owners and managers who have a passion and a genuine interest in recycling are more likely to have a successful program.
2. Compile current waste generation data to include: number of tons of trash generated by store, disposal fees per ton for waste, hauling frequencies and fees, and any ancillary charges such as: fuel surcharges, environmental fees and administrative fees. Compiling this data will provide a baseline to measure your program's future improvements and calculate savings. You will need to refer to your waste management contracts, invoices, or receipts for the amount of trash generated from your store in the prior year and the associated waste handling costs.
3. Conduct a site visit or tour of the store. Review your current waste management system and explore how best to incorporate composting and recycling of other materials. You may want to contact your local waste authority to have someone from their facility do a waste audit at your store. OGA could also recommend consultants who could complete an audit or analysis.
4. Locate a composting facility to accept the organics from your store. A composting facility is a processing facility that accepts source separated organic materials, blends them with other materials, and produces compost...a soil amendment that is sold as an alternative to fertilizers. Composting facilities can be farms, landscapers, or commercial facilities. For a list of current Class II Composting facilities in Ohio visit [http://www.epa.state.oh.us/ocapp/food\\_scrap/composting\\_facilities.pdf](http://www.epa.state.oh.us/ocapp/food_scrap/composting_facilities.pdf)
5. Locate a hauler to transport the compostable materials from your store to a composting facility. Ask your current waste hauler about your contract with them (any stipulations or franchise rules?) and ask if they have an interest in continuing to service your store by delivering your compostable material to a composting facility. It is usually less expensive to dispose of materials at a composting facility than a disposal facility. Some composting facilities may be able to provide a hauling source. **This part of the process can be the most challenging, so do not get discouraged. If your current waste hauler is not able to haul your compost, look for a niche hauler.**

6. Select a compostables collection system for your organics. Decide on a toter vs. compactor collection system – the two most common and practical options. Dumpsters are sometimes used as well. Your decision will depend upon: what type of equipment is used by your hauler; how compostables can be accepted by the composting facility; your ability to dedicate one store compactor to organics only; or how much of a capital investment your company is willing to make and acceptable storage space.
7. Complete an economic analysis of the potential savings to divert food waste from the landfill to a composting facility. You will want to compare your current costs of trash disposal with the potential costs of composting.
8. Purchase necessary equipment and supplies for the composting program. This will include containers and a compactor, if applicable. It is important to work with your hauler when selecting containers. You will need to purchase biodegradable bags to line the compost collection containers for sanitation purposes. It is recommended that you consider biodegradable bags, despite their increased cost, to minimize contamination and to reduce waste. For more information on biodegradable bags, visit the Biodegradable Product Institute (BPI) site at <http://www.bpiworld.org/>
9. Conduct staff training on the new composting program in your store. Staff training is critical to the success of the program. Training should be conducted prior to the start of the program, when new associates are hired, and at least once a year as a refresher. Ongoing training is important for new associates as well as to all staff as a refresher course in understanding the importance of composting. (see Training information on page 15)
10. When all training is complete, place composting collection containers. Compost collection containers should be labeled and as visible and as accessible as trash containers. They should be placed at workstations in the produce, deli, bakery, and floral departments; additional departments may be included depending on your program. (see sample templates starting on page 22)
11. Monitor your composting program. Once your program is established, the monitoring and quality control will become the most important aspects to maintaining your program.
12. Prepare a report on your program and successes. Share with top management and associates. This could also serve as a public relations piece for your store.
13. Look for a way to expand your recycling program – plastic shrink and pallet wrap, other plastics, cardboard, pallets, bottles, cans and office paper.

## Collection

Choosing the appropriate compost collection and storage equipment for each store location is an important initial step in starting up your program. The type of collection and exterior storage containers you choose will be initially determined by your store's physical building, your hauler's trucking capability and compatibility with the store's receiving area, and the compost processor's facility specifications, as well as initial overall costs compared to savings in tipping fees.

There are two popular collection system options – Toters and Compactors. A third collection system involves the use of dumpsters. Dumpsters may be a good option if there is easy access to the collection area by a hauler, and if space allows for a dumpster. Dumpsters have an advantage over the toter collection system in that waxed cardboard can be added for diversion if the composting facility accepts it.

### In-Store Collection System

Up to 60-75% of an average supermarket's waste stream is compostable material. Therefore, where there is currently a trash bin you should consider placing a compost container. Trash bins may be downsized and to help reinforce the idea that compostables are valued and more materials should be recycled than sent to trash. **However, you may not want to downsize your trash pickups until you have monitored the composting process for a few weeks.**

On average, the produce department in a typical supermarket will generate 50% of the store's organic waste. For this reason, making composting easy and accessible for the produce associates should be a top priority. The departments you choose to include in your program will depend on your store size, the size of your containers, and the materials your hauler and composting facility accept.

Departments:

- Produce
- Floral
- Bakery
- Deli
- Seafood
- Sushi
- Meat
- Cheese
- Select non-perishable commodities, i.e. liquids
- Prepared foods/Café
- Administrative Office



### What Materials are considered Organic and Compostable?

- Vegetable and fruit materials
- Spoiled food products
- Paper towels, paper
- Flowers, plants, soil
- Coffee grounds and filters
- Raw seafood
- Breads and bakery products
- Deli meats, sandwiches
- Cheese and dairy products
- Food preparation scraps
- Inedible grocery and frozen foods
- Wood boxes and wood pieces
- Wet and waxed cardboard
- Raw meat and poultry
- Meat trimmings and renderings
- Fats, oils, and grease

### Material that cannot be composted, but may be part of your store's recycling efforts:

- Glass
- Plastic
- Metal

All participating departments should be supplied with workstation collection containers. These containers can range in size from a five-gallon pail to a 64-gallon toter. Larger capacity collection containers are not recommended due to safety considerations (i.e. food waste is very heavy). It is recommended that you keep the type and color of compost collection containers uniform throughout the store so that associates can easily identify them. You will also want to include signage on all containers.

When the collection containers are full, they will need to be emptied similar to your trash collection procedures. A designated compactor, dumpster, or area for the toters will need to be located at the back of the store. Your compost hauler will then collect the materials from the containers on a predetermined schedule or an on-call basis. *It is important that the schedule is established prior to the start of the program.* **As mentioned, you may not want to decrease your trash pick-up when first starting the program, as you will want to determine the % of trash and compostables over a few weeks time.**

**Special considerations for toter collection systems:** If space allows and your hauler is collecting toters, the toters can be placed directly in departments, filled with compostables, rolled to the back of the store for pick-up and exchanged for empty ones. Collection frequencies for toters are driven by the store sales volume, number of departments participating, seasonality, and transportation logistics/economics.

When working with a hauler, confirm that the company has the flexibility to increase/decrease the number of pick-ups as needed.

## Compostables Collection Container Options

There are a variety of containers that can be used to collect compostables in supermarkets. Each store will have to determine what works best for them. It is recommended that composting containers be color-coded and different from current trash bins. Making the compost containers uniform will help with recognition and consistency in recycling. Signage on the containers is also very important.

Aspects to consider when reviewing collection container options:

- Types of containers that your hauler and composting facility can accommodate
- Size
- Space
- Capital or small equipment costs
- Compatibility with trash bins
- Color-coding
- Mobility
- Use of liner bags
- Ergonomic considerations

Recommended outdoor container types:

- Self-contained compactor
- 64 gallon toter
- Dumpster

Recommended in store container types:

- round 20 gallon bin on wheels
- “Slim Jim” with handles, 16 or 23 gallon

## Liner Bags for In-Store Collection

Liner bags are usually a requirement for all **in-store** compost collection containers in order to reduce odor and improve sanitation and cleanliness. “Certified Compostable” bags are the recommended bags to be used.

Considerations:

- Talk to your composting facility about the bags you plan to use.
- Find bags that fit the dimensions of the collection containers. Bags should be tall enough to drape over the sides of the container rim. Please note that it is important that the bags do not collapse into the container because this will cause the bins to become dirty.
- Look for the “certified biodegradable” label or approval symbol on each bag.

- The Biodegradable Product Institute (BPI) has the most up-to-date information on approved products that have been properly certified. Visit their website at [www.bpiworld.org](http://www.bpiworld.org) for additional information.

Certified Compostable Liner Bags are in compliance with the American Society for Testing and Materials (ASTM) specifications for compostable plastics (D6400-99). These bags are designed to compost or biodegrade quickly and safely.

**Outside or Back Room Toter Collection System:** you may want to use two (2) plastic liners in the toter to keep the toter clean as they are less expensive than biodegradable bags. Both liners will stay in the toter when the toter is emptied of organic waste. The first liner can then be changed, and the 2<sup>nd</sup> liner can protect the toter from spills, which means less time spent washing out the toter.

**Examples of Collection Containers**



**Toter**



**Compactor**



**Slim Jim**



**20 Gallon Bin**

**Composting Truck with Toter Lifter**



Pictures from the Massachusetts Supermarket Composting Handbook

## **Training and Educational Tools**

Proper education and training is the key to a successful composting program. It is also important to train new associates and re-train current associates to ensure long-term success, and to be able to provide an opportunity for positive public relations. For successful implementation of the program, please consider face-to-face training when possible, recruit a “champion” for the program from each department to lead the effort, and make sure top management is on board.

### **Program Announcement**

It is recommended that an announcement be made to all associates and store vendors prior to the start date. This will allow time to answer questions, as well as provide additional information. The program should to be announced to customers. It is recommended to make the announcement to customers a few weeks after the implementation of the program. This will ensure that the bugs have been worked out.

Sample letter to associates – see page 13

Sample letter to vendors – see page 14

## Sample Letter to Associates

Dear Associates:

We are pleased to announce the start of a new program to compost biodegradable waste materials from our store. These compostable materials will be separated from trash and hauled to a composting facility, where they will be used to make a valuable soil-like product – compost, which is used to enrich soils. Composting will help us to conserve valuable natural resources and landfill space.

Composting is a new initiative for [company name], and we are proud to be leading this effort. We need your help and cooperation to make this a successful, cost-effective, and environmentally important endeavor in our store. Training will be provided to all staff and you will receive additional information in the near future.

Starting on [date], labeled composting containers will be placed in departments to collect compostable materials, such as outdated food, food preparation scraps, produce trimmings, paper towels and flowers. All other trash and recyclables (plastic, glass, and metals) must be placed in appropriate containers. Signs will be posted in each department to explain how to properly separate compostable materials. **It is very important that plastics, glass, aluminum, Styrofoam, and metals are not mixed with compostable materials.**

We will be monitoring the composting, recycling and trash bins, so please help out and do your part. With everyone's help, we can potentially lower our waste disposal costs, while doing something to help the environment.

If you have any questions, please do not hesitate to contact [name of manager].

Thank you in advance for your help with this very important program!

Sincerely,

Store Management

## Sample Letter to Vendors

Dear Vendor:

We are pleased to announce the start of a brand new program to compost biodegradable materials from our store. These compostable materials will be separated from trash and hauled to a composting facility where they will be used to make a valuable soil-like product – compost, which is used to enrich soils. Composting will help us to conserve valuable resources and landfill space.

We need your help to ensure the success of this new composting program! Beginning on [date], we are asking our service representatives to cooperate with our associates by separating compostable materials, such as outdated food, food preparation scraps, produce trimmings, paper towels and flowers. All other trash and recyclables (plastic, glass, and metals) must be placed in appropriate containers. Signs will be posted in each department to explain how to properly separate compostable materials. **It is very important that plastics, glass, aluminum, Styrofoam, and metals are not mixed with compostable materials.** Please inform all your service representatives about this important program.

Your cooperation in helping our associates make this a successful composting program is much appreciated. If you have any questions, or need additional information, please contact [name] at [number] or [email].

Thank you for helping us reduce our waste stream to help the environment.

Sincerely,

Company Management

## **Training Tools for Managers**

This initial training session should include the store managers and department managers who will be separating the compostables. The training should include visuals and will last approximately 60 minutes.

### **Manager Training Agenda**

1. Introduction – if possible, include composter, hauler and other stakeholders.
2. Explain why your company has adopted a culture of composting and what it means to the company and the environment. (show samples of what is considered compostable)
3. Review training materials. (see next pages for samples) (you may want to email the training materials prior to the training date so the managers can review them)
4. Review the list of materials that are compostable, materials that can be recycled and materials that will be considered trash. (show visuals)
5. Review common contaminants.
6. Display new collection containers and signage.
7. Discuss collection procedures – where the containers will be placed, what to do when they are full, where to get empty containers, hauling schedule, and who to call if there is a problem.
8. Do a walk through of the respective departments and conduct a short training exercise.
9. Questions and Answers

## **Training for Non-Management Associates**

### **Initial Store Associates Training**

Associates working in departments that are involved in composting should learn about their role in separating compostables through face-to-face training by their department manager and by reading and referring to the composting guidelines posted in their department. During this training, the store manager may be able to identify an associate who will be an advocate for the program. This can be very helpful in moving the program forward.

### **New Hire and Ongoing Training**

When a new associate is hired, they should receive face-to-face training by a department manager, with specific attention to the department composting guidelines. New associates should be given the opportunity to work with trained associates to learn the importance of separating compostables.

Ongoing training for all associates should include feedback on program successes and an opportunity to initiate improvements to the composting program.