



# Composting and Waste Recovery

## FOOD POLICY BRIEF #5

*Produced by the Cleveland/  
Cuyahoga County Food Policy Coalition*

### **The Problem**

Unlike the country, cities do not have the advantage of manure from well-managed livestock to build soil fertility. However, cities do have an abundance of organic materials not available in rural areas. Wood mulch comes from urban forestry departments and landscaping businesses that grind up fallen branches, dead limbs, or diseased trees. Leaf waste can be gathered from residents. Large quantities of food waste are generated by households, hospitals, restaurants, schools, and universities. What has been traditionally approached as a solid waste challenge is actually an opportunity for improving topsoil to support urban agriculture.

### **The Facts**

According to a waste audit conducted over 5 days at Cleveland's West Side Market in 2008, an average of 500 pounds of food waste is generated during peak market days (about 2,500 pounds per week). Audits conducted at three other area restaurants revealed an average generation of about 400 pounds of food waste per week. Baldwin-Wallace College generates about 200 pounds of kitchen prep waste each day which is composted in an in-vessel system and used for campus landscaping. Other organic wastes available in the city include coffee grounds from cafes and coffee shops and spent grains from micro-brewery operations.

City or county-wide initiatives to promote composting of organic wastes turn an expensive liability into a valuable input for building topsoil and the productive capacity of urban or rural farms that can, in turn, increase the availability of quality produce for local consumption.

### **What's Being Done**

Composting can take a variety of forms in the city. In-vessel systems are ideal for

managing compost in the city

where composting conditions can be controlled and odors can be minimized. In-vessel systems can also be designed to compost anaerobically (without oxygen) to generate methane that can be used as a supplemental energy source.

Vermicomposting systems use earthworms to process large

quantities of food waste in areas where space is limited. Worm castings provide an optimal source of fertility for plants. Food waste and other organic wastes can also be directly applied to convert compacted urban soils, turf lawn, or even asphalt lots into productive garden beds. This has been done on several sites around Cleveland. Using a "sheet mulching" technique, cardboard, wood mulch, leaves, shredded paper, food waste, coffee grounds, brewery waste, and topsoil are layered together, producing an immediate bed for growth.

*There's a direct connect  
between the true health of  
a nation and the health of  
its soils.*

Darren Doherty,  
Peramculture Designer

## What's Next?

Future options for expanding compost and waste re-utilization efforts in Cuyahoga County include:

- Connecting waste collection and processing with urban farmer and community gardening networks to maximize capture of food and other urban wastes for urban agriculture;
- Encouraging collaboration between institutions, restaurants, and grocers to cluster food waste collection and distribution in targeted sections of the city; and
- Developing infrastructure to enhance composting efforts, including in-vessel systems, grinders/pulpers for food waste processing, collection and distribution, and bio-digesters to produce energy off of compost systems.

Food waste composting can take a variety of forms. Urban growers in Cleveland have recently experimented with “sheet mulching” food waste with other organic wastes to build gardens on top of asphalt. Not only does this produce a local source of food, but it absorbs stormwater.

The garden featured to the right was organized by Neighborhood Family Practice. The raised bed gardens included layers of cardboard, 24 inches of wood mulch, straw, food waste contributed by Dave’s Supermarket, and topsoil. Worms were added to the gardens to break down the food waste and other organic wastes.

Six weeks after installation, the garden beds were painted by volunteers and offered greens to patients and neighbors as a part of a nutrition education program.

