

# Compost Facilities in IL

## Operations and Challenges



presented by:

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Illinois Circularity Conference | October 2025

# Overview



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# Overview

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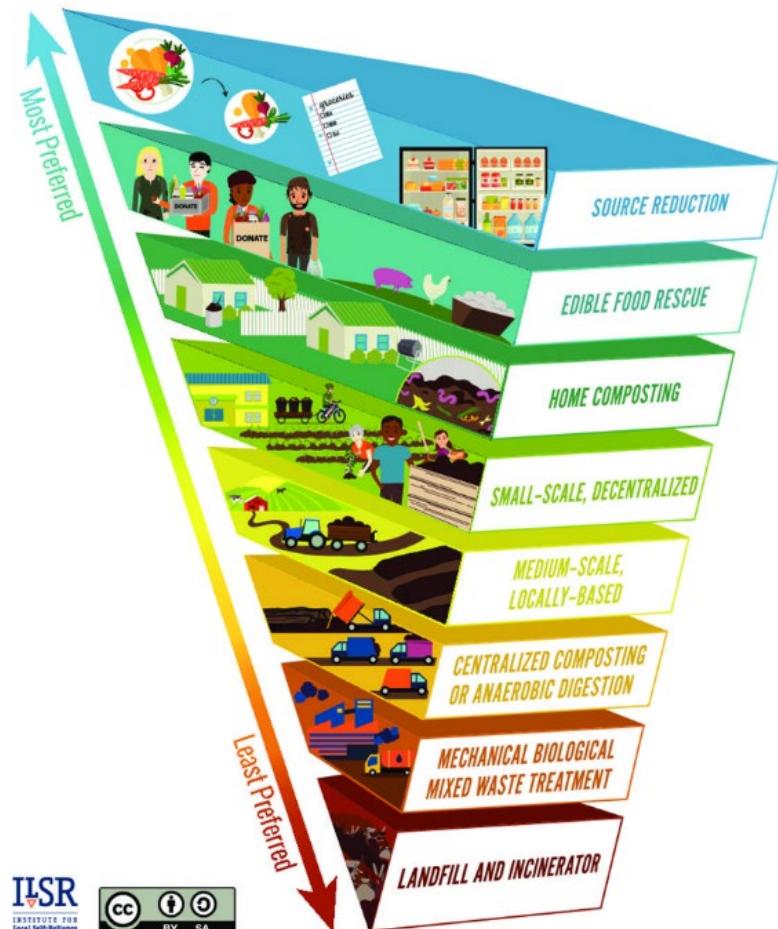
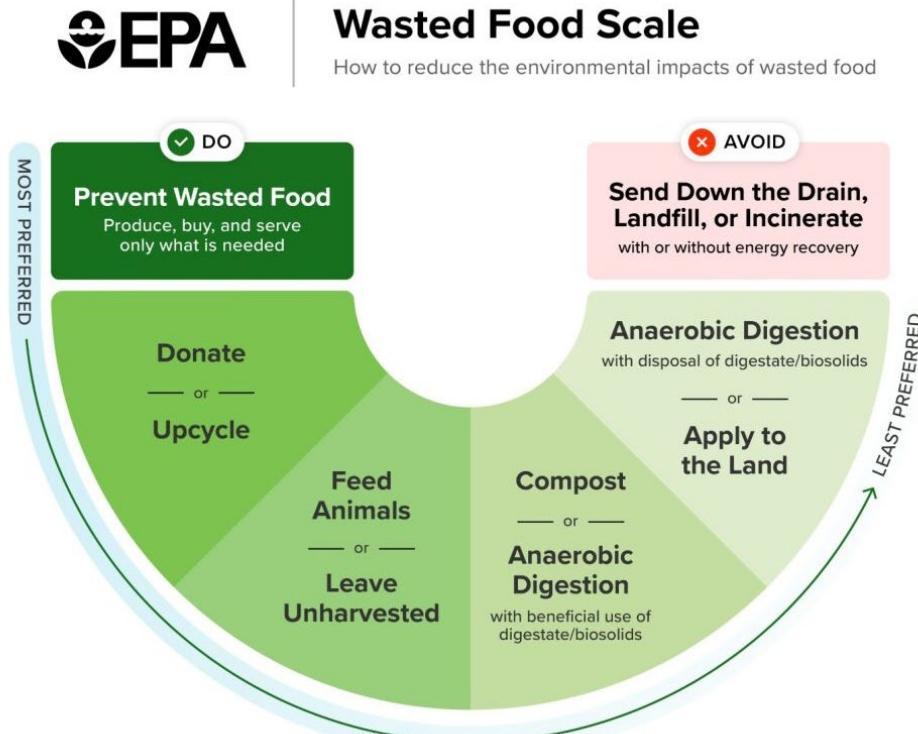


Operating a licensed compost facility in Illinois involves several key steps:

- **Managing incoming materials**
- **Handling and processing materials**
  - Windrow method
  - ASP / CASP techniques
  - In-Vessel systems
- **Delivering compost to final markets**

It is essential to recognize the challenges encountered in managing a compost facility.

# Organics Management

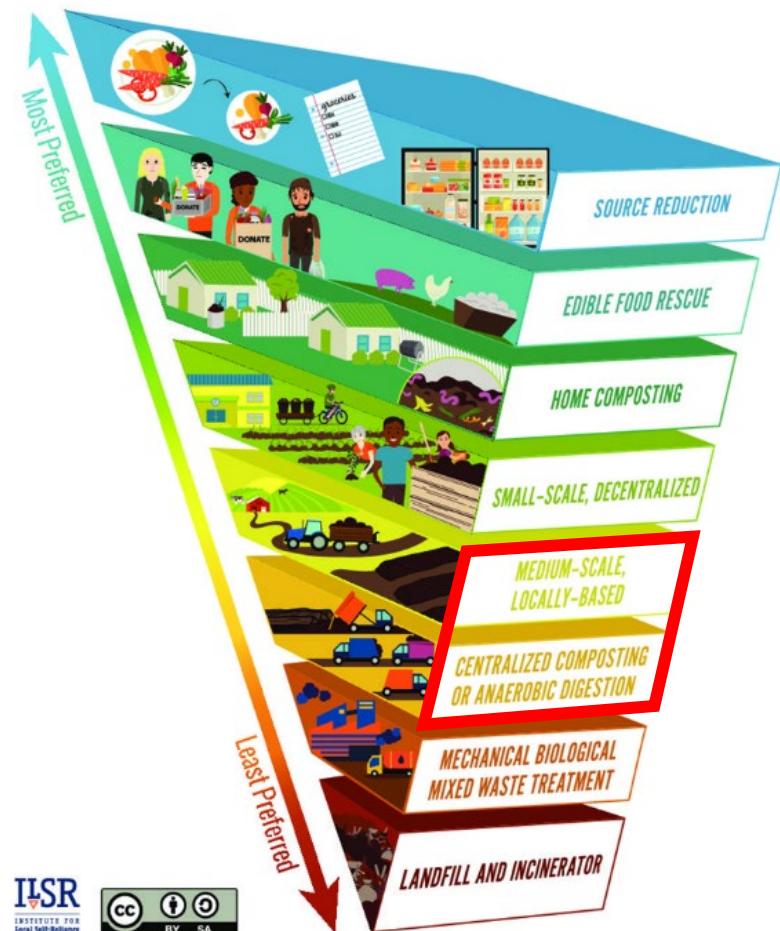
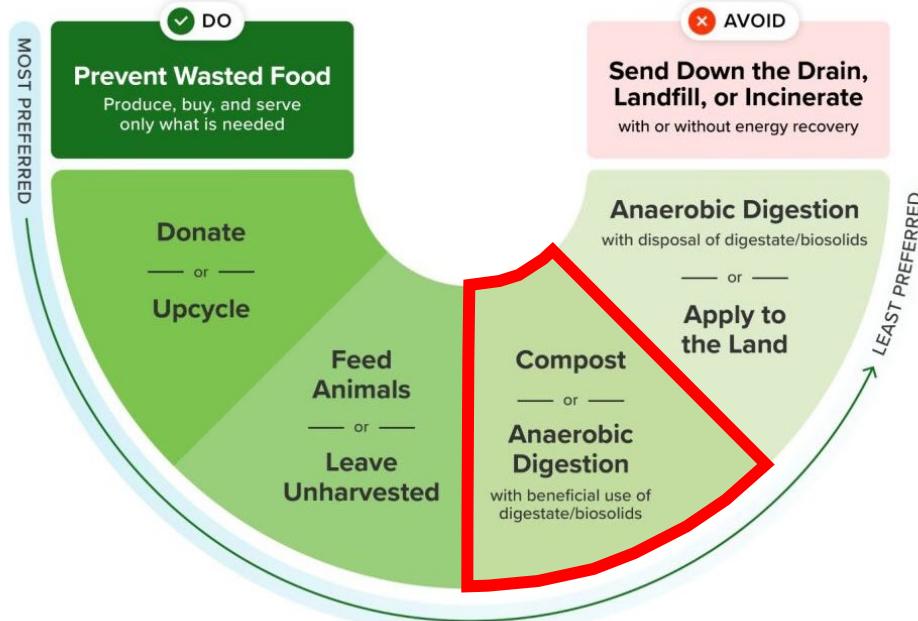


# Organics Management



## Wasted Food Scale

How to reduce the environmental impacts of wasted food



# Compost Basics

**Composting is nature's circular process of growth and decomposition**

Composting involves the controlled breakdown of organic matter by microorganisms in the presence of oxygen. The end result, known as compost, serves as a valuable and nutrient-rich addition to soil.



# Compost Mechanics

To support bacterial growth, compost should have a mix of both **nitrogen-rich** and **carbon-rich** materials in a roughly 1:3 ratio

Generally, materials that are **green and moist** are high in nitrogen and those that are **brown and dry** are high in carbon.

1 part nitrogen-rich  
(greens)



3 parts carbon-rich (browns)



Source: EPA and University of Nebraska Extension

# Incoming Materials

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**“If it grows, it goes”**

Plant and animal material are generally accepted in commercial composting systems.



# Incoming Materials

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**“In doubt? Throw it out”**

If you are unsure if an item is compostable, throw it in the landfill!  
**It is better to throw something away than risk contaminating compost.**



# IL Composting Regulations

## 35 IAC Part 830 Regulations

- Landscape Waste Compost Facility
  - Allows up to 10% additives by volume or more if IEPA approval is achieved.



## 35 IAC Part 807 Regulations

- Organic Waste Compost Facility
  - Allows for > 10% additives by volume
  - Local Siting Approval is required, with some exemptions
    - Daily cover of incoming material
    - Coordination with IEPA on monitoring (odor, vectors)

# Contamination Challenge



Source: Food and Agriculture Organization of the United Nations



**Increased additive = Increased contamination**

# Contamination Challenge

Contamination ends up in the “overs” pile  
**Overs Pile = Legacy Pile**



Overs can be reused but...  
garbage is ultimate landfilled

# Contamination Challenge

Increasing “**greens**” must correlate with an increase of “**browns**”  
and increase in **end market demand**

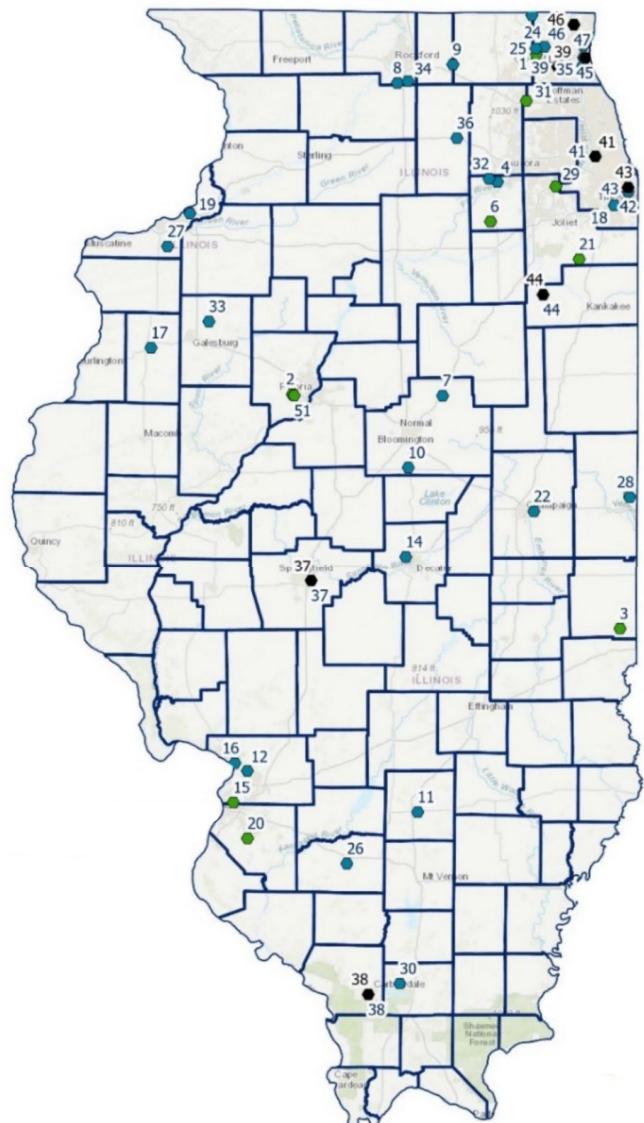
**Greens**



**Browns**



# Compost Facilities in Illinois



- Windrow method
- ASP / CASP techniques
- In-Vessel systems

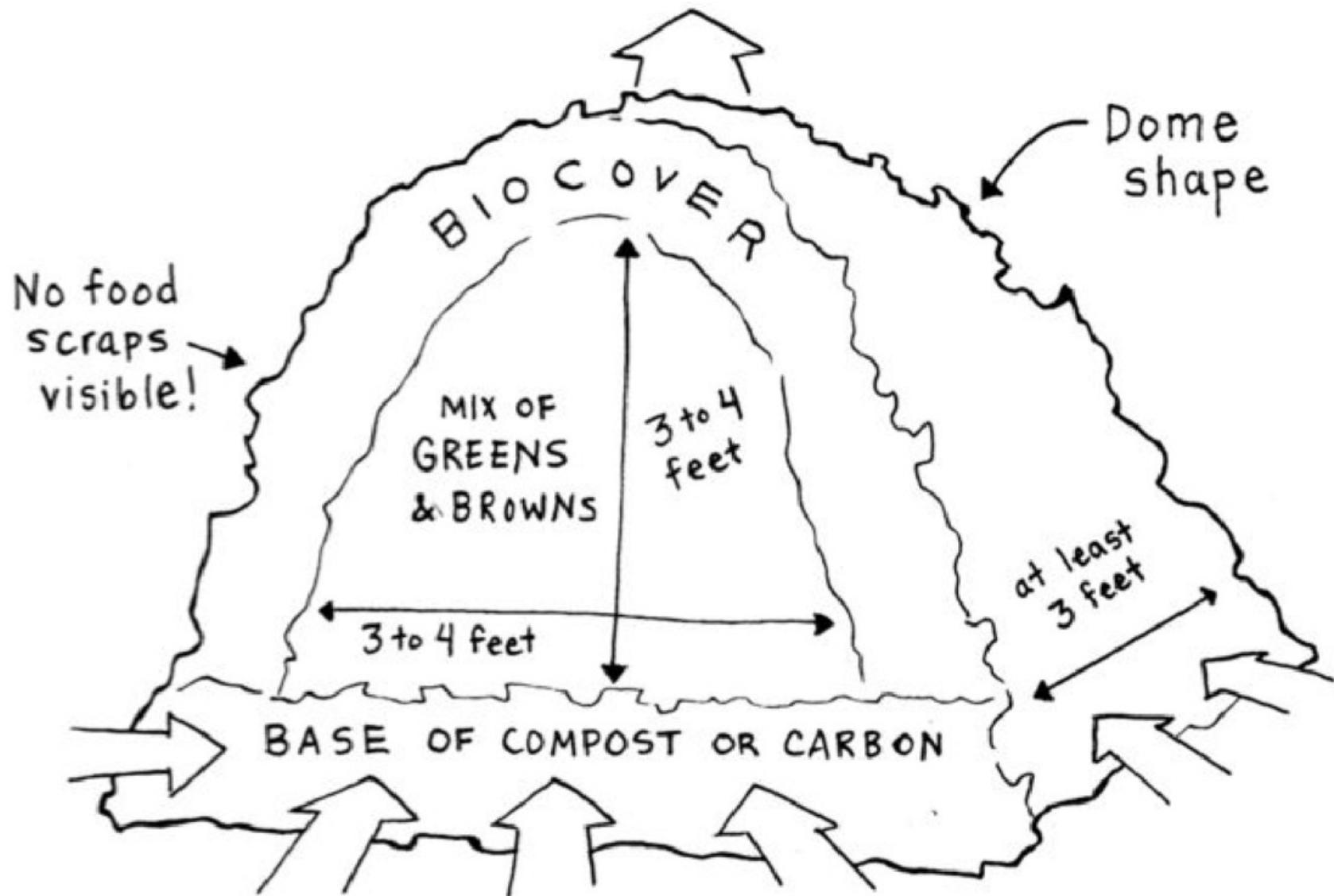
## Landscape and Food Scraps

- Landscape Only
- Landscape and Food Scraps

## Private Compost Facilities (No Outside Material Accepted)

- Private Compost Facilities (No Outside Material Accepted)

# Windrow Method



# Windrow Method

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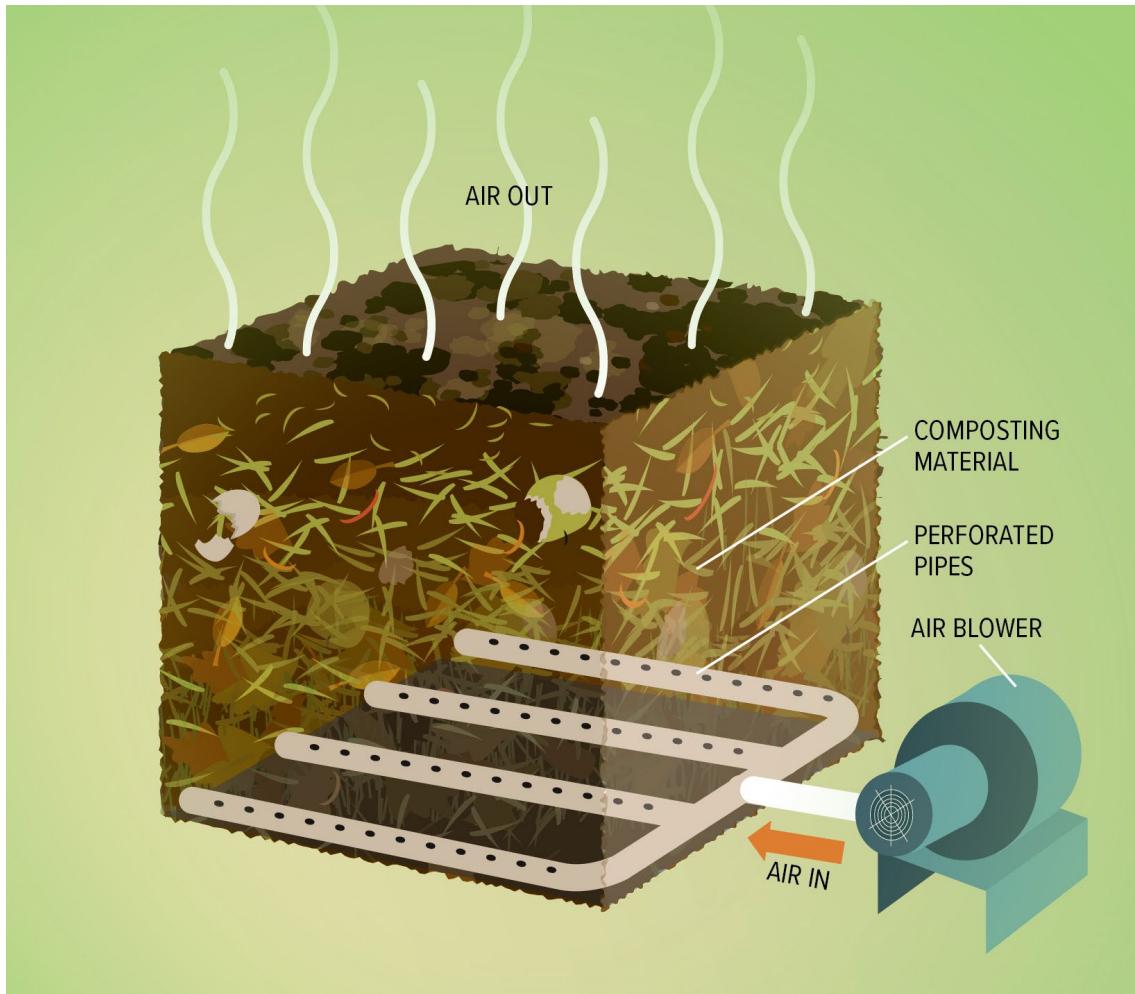
Windrows in Action

Turning the Pile



# ASP / CASP Techniques

## Aerated Static Pile



# ASP / CASP Techniques



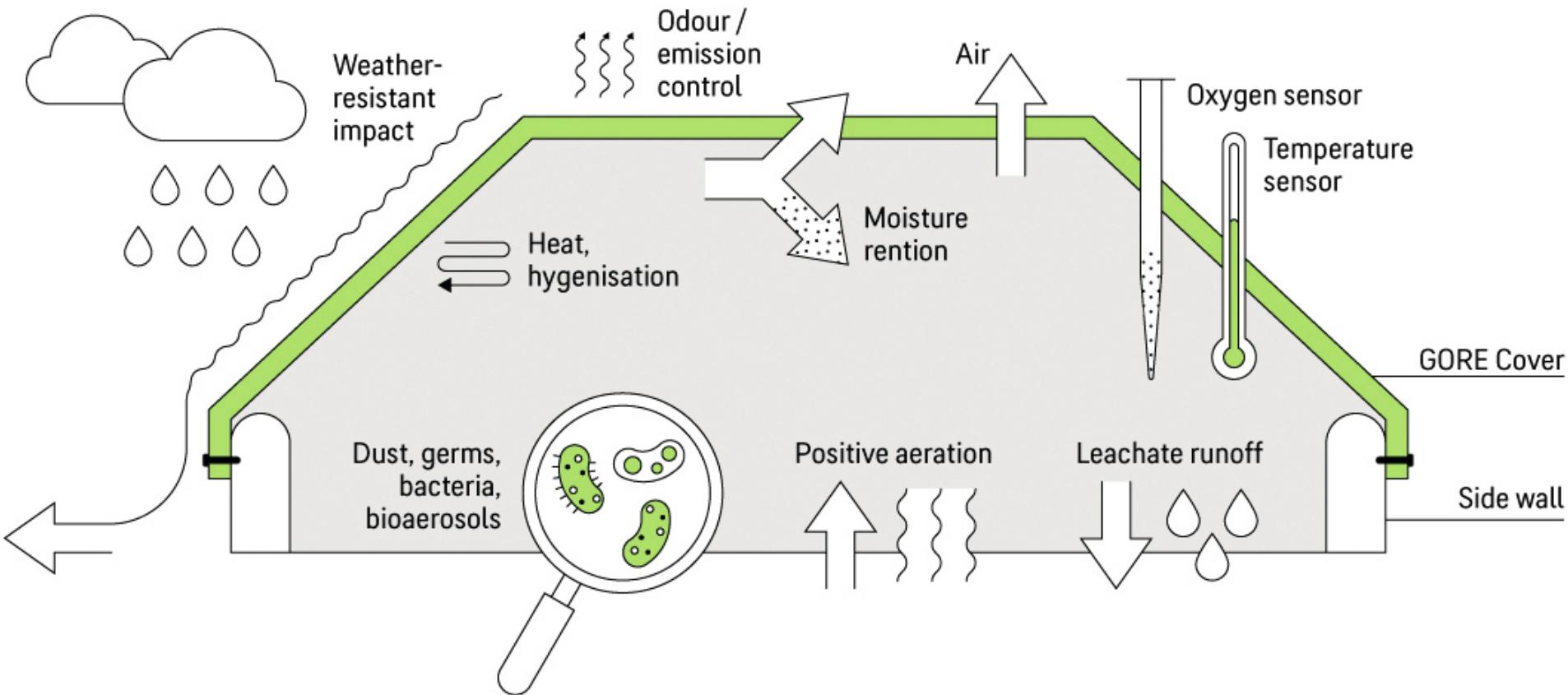
ASP Empty Bunker



ASP in Action

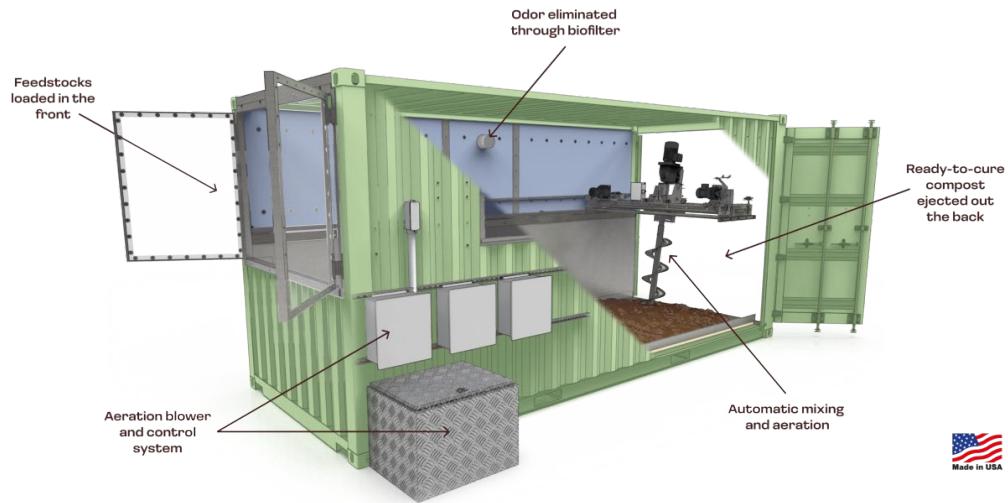
# ASP / CASP Techniques

## Covered Aerated Static Pile



# In-Vessel Systems

## Mechanical Processing



Source: Green Mountain Technologies – Earth Flow



Source: Global Composting Solutions - HotRot



Source: BROME 632 unit

# Hybrid Systems



# End Markets Challenge

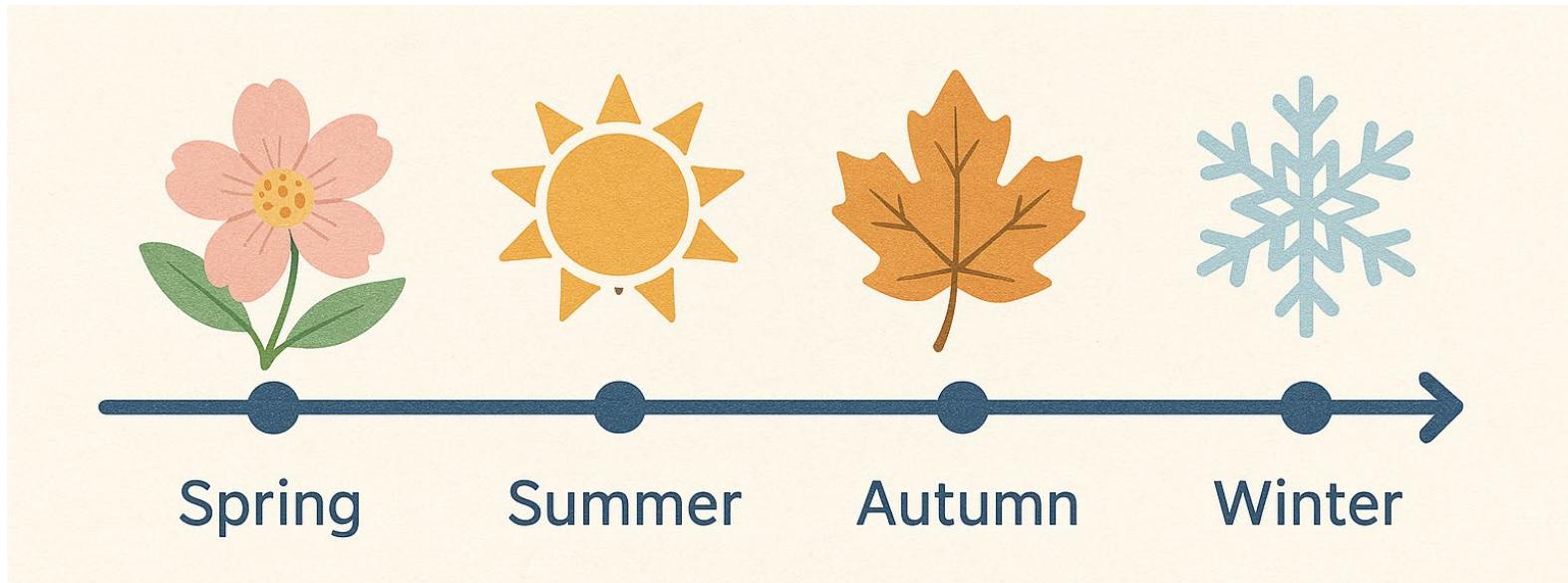
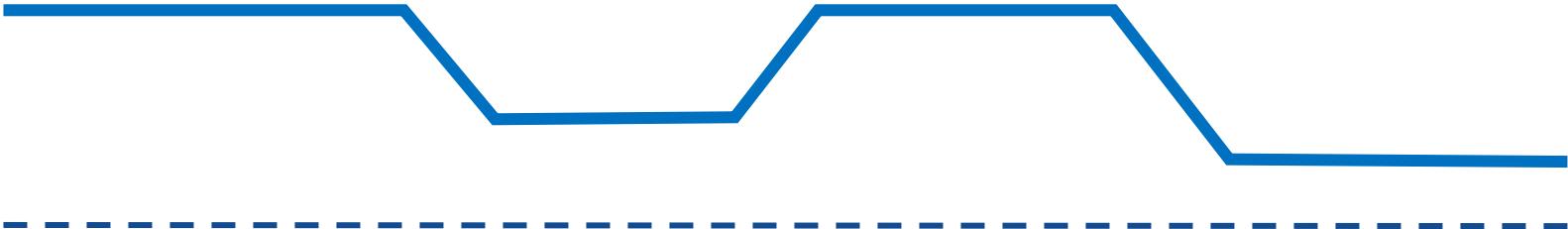
Where does our high-quality compost go?

- Landscapers?
- Road Contractors?
- Nursery Yards?
- Homeowners?
- Farmland?
- Wholesale Manufacturers  
(Bagging Facilities)
- Park Districts?



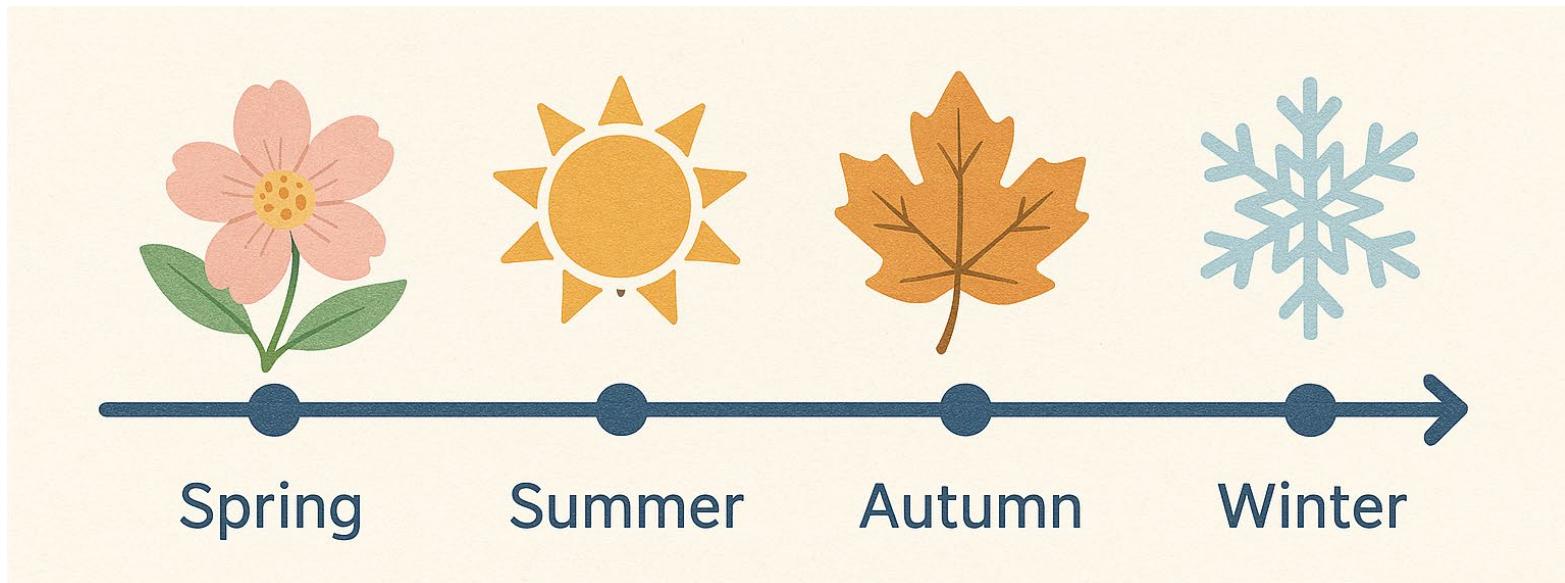
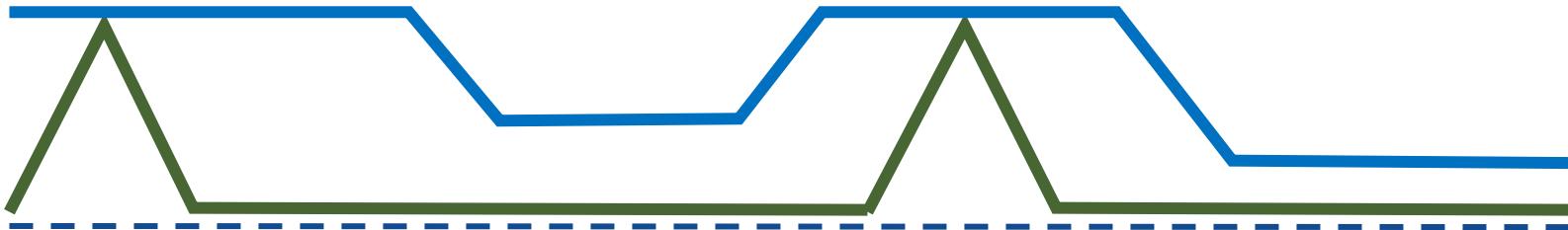
# End Markets Challenge

When compost is collected



# End Markets Challenge

When compost is applied



# End Markets Challenge

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How do we grow  
consistent end  
markets and users of  
compost?

# End Markets Challenge

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- **Value of compost**
- **Education on usage**
- **Collaboration between operators and users**



# Thank you!

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