COMMERCIAL COMPOSTING, “GREEN-WASHING” AND ECO LABELS

1. COMMERCIAL COMPOSTING OVERVIEW

2. COMPOSTABLE VS. BIODEGRADABLE

3. ECO LABELS – WHAT TO LOOK FOR

WORLD CENTRIC

Commercial Composting – What is it?

- Commercial composting facilities provide the *ideal/best* composting conditions.
- Many organic wastes, like meat or bio-plastics (including compostable foodservice products), can only be composted under *ideal* composting conditions.
- Most Green-waste bins that will accept meats and compostable products send their waste to a commercial compost facility.

What Are Ideal Composting Conditions?

- **Temperature.** Most commercial facilities regularly turn or aerate their piles and monitor the internal temperature to assure it is between 105° and 145°F.
- **Air flow.** Regulating airflow to the compost heaps/windrows helps maintain proper temperature, assuring that micro-organisms receive enough oxygen to survive and reproduce.
- **Moisture content.** Commercial facilities regularly monitor the moisture content of their piles and add more if necessary (microorganisms require adequate moisture levels to survive).

Benefits of Commercial Composting

- **Convenience.** For some, sending organic waste to a commercial facility is easier than investing in an on-site composter.
- **Regulation.** Government regulations are in place to assure that commercial composting facilities control against disease and groundwater pollution.
- **Diversity.** Many materials like meats and dairy products can be composted at commercial facilities.
- **Bio-plastics can be composted.** In order to be deemed compostable, new eco-friendly bio-plastics can only be composted fast enough under the ideal conditions present in commercial facilities.

Case Study: Z-Best Composting Facility, Gilroy, CA

- Municipal Solid Waste Composting/Food Composting

Phase 1: Sorting out non-compostable items

- Materials are processed in an enclosed 20,000 square foot building to remove non-compostable items.

Phase 2: Shredding, “Ag Bag” and Aeration

- The compostable items are then shredded and transported to the composting area where they are ejected into a 350-foot long bag that houses all the compostable wastes.

Phase 2: Shredding, “Ag Bag” and Aeration (cont’d)

- PVC pipes are also introduced into the bag and used to aerate the compostable materials

Phase 3: The Compost is Cured

- Retention time in the bags is about four months, then the contents are removed, turned and cured prior to screening

Phase 4: Compost is Screened for Contaminants

- The materials are then transported to a screening system that is used to remove any larger materials which are then disposed.

Phase 5: Final Curing (4 weeks)

- The smaller compostable materials are stockpiled and cured for an additional four weeks before being screened again.

Final Phase:

- Final Screening: Trommel Screen

Finished Compost – Finished Product

Challenges to Commercial Composting

- Incorrect Sorting: Plastics or other non-compostable materials that are accidentally thrown into compost bins
- “Green-washing”: The existence of products that mislead consumers about their environmental benefits.
  - Green-washing makes it difficult to identify compostable products from non-compostable products.
  - Example of Green-washing: “Compostable” products vs. “Biodegradable” products.

COMPOSTABLE VS. BIODEGRADABLE

WHAT'S THE DIFFERENCE?

KEY CHALLENGE: CONSUMER CONFUSION

"Compostable" – Definition

- A *compostable* item is capable of undergoing biological decomposition in a compost site.
- Requirements:

1. Disintegration:
   - Item must achieve 90% disintegration in 90 days
2. Biodegradation:
   - Item must demonstrate a 60% conversion to CO_2 within 180 days
   - (conversion to CO_2 and biomass continues even after 180 days)
3. Item leaves no toxicity in soil

Who sets composting standards?

- ASTM International

ASTM Composting Standards

- ASTM D6400
  - "Specification for Compostable products"
  - Demonstrates Biodegradability under optimal aerobic conditions
  - Referenced in regard to plant fiber, bioplastic films and solid compostable bioplastic products
- ASTM D6868
  - "Specification for Biodegradable Plastic used on Paper and other Compostable Substrates"
  - For packaging and food service items made of plastic coated paper, board & other fibers

As per ASTM International:

- *"a compostable item is capable of undergoing biological decomposition in a compost site as part of an available program, such that the plastic is not visually distinguishable and breaks down to carbon dioxide, water, inorganic compounds, and biomass, at a rate consistent with known compostable materials (e.g. cellulose), and leaves no toxic residue."*

Compostable vs. Biodegradable

- What's the difference!?
  - *Compostable* means that an item will turn into nutrient-rich soil within a specific timeline.
    - Certification standards require specific timelines in order for products to be called compostable.
  - Everything that is *compostable* is *biodegradable*, but not everything that is *biodegradable* is *compostable*!
  - Claiming that an item is *biodegradable* means nothing without providing context of the conditions in which the item will biodegrade.
    - It could biodegrade anywhere from a month to 10,000 years!

Biodegradable – A potentially misleading term!

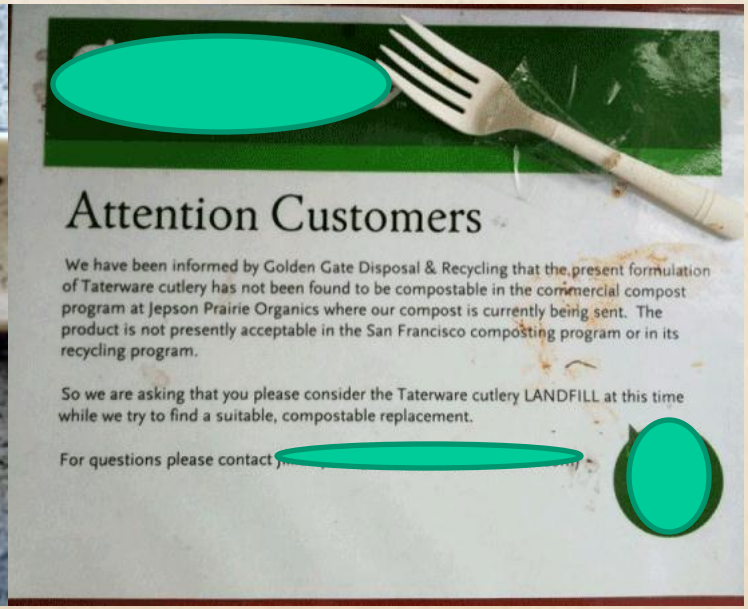
- Biodegradable:
  - Does not specify the length of time it will take an item to fully biodegrade.
  - Does not specify the conditions in which the item will biodegrade
  - Creates misleading interpretations (“green-washing”)
- Example:
  - A piece of Styrofoam (or even a rock!) can be called biodegradable – but unless you are provided with the timeframe it will take for full biodegrading , one can only speculate how long it will take to fully biodegrade back into soil.

What is Greenwashing?

- The act of misleading consumers regarding the practices of a company or the environmental benefits of a product or service.

Example of Greenwashing: "Biodegradable" Cutlery

- A piece of plastic cutlery that is labeled *biodegradable*
- Unless the item specifies the environment and timeframe for biodegrading back into soil, the product is potentially misleading.



Text From Previous Image:

- *"Dear customers, we have been informed by Golden Gate Disposal & Recycling that the present formulation of ******** cutlery has not been found to be compostable in the commercial compost program at Jepson Prairie Organics where our compost is currently being sent. The product is not presently acceptable in the San Francisco composting program or in its recycling program."*

Identifying Compostables and Avoiding Green-washing

1. Be cautious of items labeled *BIODEGRADABLE*, unless the disposal environment and timeframe for decomposition are also specified.
2. Look for products specifically labeled *"COMPOSTABLE,"* as compostability strictly defines the environment, biodegradation timeframe and additional criteria such as disintegration and toxicity.
3. Look for products that are Certified Compostable by the Biodegradable Products Institute (BPI) , meeting rigorous ASTM D6400 and ASTM D6868 standards for composting.

Why should I avoid "Biodegradable" products?

- Some products will claim to be BIODEGRADABLE, but if their product is not *certified compostable,* there is no evidence that the product will actually biodegrade in the conditions it will be disposed.
- In some cases, products contain a mix of plastic resins *AND* biobased resins, leaving the product neither compostable nor Recyclable, relegating disposal to the third option: landfill ☹)
- When a greenwashed product is disposed of incorrectly (i.e. sent to a compost facility), it can contaminate the compost stream and leach toxins with a potential to render the soil amendment end-result as unusable.

What About the FTC's Stance on Biodegradable?

- The FTC's stance on Greenwashing in regard to the term *biodegradable*:
  - ***(b) biodegradable:*** Claims of degradability, biodegradability or photodegradability should be qualified to the extent necessary to avoid consumer deception about: (1) the product or package's ability to degrade in the environment where it is customarily disposed; and (2) the rate and extent of degradation.
- If a product claims to be biodegradable, but provides no qualification of the claim (via certification, testing results or description of the environment where the item is considered to be biodegradable)… ***THEN YOU'RE BEING GREENWASHED***!

What does the FTC say about “Compostable”?

- The FTC’s stance on Greenwashing in regard to the term *compostable*:
  - ***(c) Compostable:*** It is *deceptive* to misrepresent, directly or by implication, that a product or package is compostable. A claim that a product or package is compostable should be substantiated by competent and reliable scientific evidence that all the materials in the product or package will break down into, or otherwise become part of, usable compost (e.g., soil-conditioning material, mulch) in a safe and timely manner in an appropriate composting program or facility, or in a home compost pile or device.

What is California's Take on Biodegradable Issue?

- Under California law, it is illegal to label a plastic food or beverage container as biodegradable.
- California takes the position that plastic takes thousands of years to biodegrade and may never do so in a landfill.
  - (California's Business and Professions Code § 17200)
  - Statutory Restrictions on Labeling Plastic "Biodegradable" or "Compostable"
  - Untrue, Deceptive or Misleading Environmental Marketing Claims

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Products Should be Clearly Marked “Compostable”

ECO-Labels - Identifying Eco Labels

- Biodegradable Products Institute (BPI)
  - Composting Certification
- USDA Biobased Labels
  - Biobased Materials Label
  - (i.e. % of product that is composed of renewable agricultural materials)
- Forest Stewardship Council (FSC)
  - Responsible paper sourcing certification

ECO-Labels – BPI – The Leading Compostable Cert.

- **Biodegradable Products Institute (BPI)**

  - BPI is a third-party organization that reviews and certifies compostable products that meet *ASTM D6400 and ASTM D6868* standards and conditions for compostability.

ECO-Labels: USDA BioPreferred Program (Biobased Labels)

- NOT A COMPOSTING CERTIFICATION!
- Composed in whole, or in significant part, of biological products or renewable agricultural materials.
- Indicates that a product has been independently certified to meet USDA BioPreferred program standards for biobased content.
- Awarded based on measures of renewable carbon content vs. fossil carbon content contained in a product.

Compostable vs. Biobased

- What's the difference!?
  - Biobased materials are composed either partly or entirely of renewable plant materials.
  - This describes the content, but not end-of-life.
  - *Compostable* materials are designed for a specific end-of-life (composting), and in most cases are made of entirely biobased material.
  - USDA Biobased labels are not composting certifications, as they simply designate that products that are composed wholly or significantly of agricultural ("biobased") ingredients.

ECO-Labels: Forest Stewardship Council (FSC)

- FSC certified forest products are verified from the forest of origin through the supply chain. The FSC label ensures that the forest products used are from responsibly harvested and verified sources.

Thanks for Reviewing! Keep Composting!

Questions or Comments?

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