

Composting

for Greek Houses

Table of Contents

What is Composting?.....	Page 2
Necessary Materials.....	Page 3
Responsibilities.....	Page 4
Potential Costs and Challenges.....	Page 5
Acceptable/Unacceptable Materials to Compost.....	Page 6
Agreement Document.....	Page 7
Weight Log.....	Page 8

What is Composting?

Compost is a natural process that occurs in nature resulting from the decomposition of organic material. A compost bin allows for the same process that occurs in nature under controlled conditions and at an accelerated rate. A wide range of materials can be composted, but must consist primarily of organic components. During active composting, microorganisms and bacteria break down organic material into simpler smaller particles reducing the total volume of the original materials—usually by up to 80 percent. The composting period depends on a number of factors including, temperature, moisture, oxygen, particle size, the carbon-to-nitrogen ratio of the organic material placed in the compost bin, and how often turning occurs. Effectively managing the listed factors will accelerate the composting process.

What Goes On During Composting?

Composting begins as soon as raw materials are mixed together. During composting microorganisms consume oxygen while feeding on the organic material provided. Temperature is directly related to microorganism activity. Active composting generates heat, while large quantities of carbon dioxide and water vapor are released into the air. Due to the carbon and water losses the amount of the final product is reduced significantly. As active composting begins to slow temperatures will gradually decrease until the compost reaches ambient air temperatures. A period of curing usually follows the active composting, during this period the materials will continue to break down by the remaining microorganisms. At this point the stabilized compost may be safely handled. Compost is normally dark brown with an earthy aroma.

Why is Composting Important?

Composting significantly reduces the amount of waste we send to landfills. According to the United States Environmental Protection Agency approximately 30% of landfill waste consists of organic food waste that could be composted. When food ends up in landfills it becomes a major source of methane, a potent greenhouse gas. Composting has various environmental benefits including the increase in drought resistance, soil health improvement, and the decreased need for pesticides and fertilizers. In addition indirect improvements from composting include better sanitation and public safety reducing bad odors from trashcans and dumpsters. Microbes found in compost also break down toxic organic compounds such as

petroleum and improve CEC (cation exchange capacity) holding more nutrients in the soil for plant use.

Necessary Materials

Provided by Residential Services:

- Composter

Provided by Sustainability Coordinator:

- Proper signs to be placed around the house (PDF will be provided)

Provided by Greek House:

- Buckets
- Cleaning Supplies
- Gloves

Greek House Responsibilities

Before starting composting:

1. Complete checklist on the agreement form and return the form
2. Appoint someone to be responsible for the composting process (see responsibilities below)

During composting:

1. Emptying buckets into composter and recording weight and frequency of waste diverted on a daily basis
2. Turning composter
3. Emptying composter when full
4. Educating house on composting progress and practices
5. Write 1-2 page report on composting activities and logs (submit annually)

Potential Costs & Challenges

Costs

- Bucket: < \$5
- Cleaning supplies: < \$20

Challenges (and how to prevent them)

- Smell: Stir compost regularly to minimize anaerobic bacteria
 - This could be a sign of nitrogen loss and is the only time anything should be added to the composter once the pile has begun to decompose.
 - Ammonia smell: Add brown materials (ex. leaves, straw, shredded newspaper) to add carbon
- Attracting animals: Bury food scraps in the pile, don't include meat/bones, choose a closed bin, and/or place a Petri dish filled with vinegar in the bin
- Materials requiring special handling: Slow to decompose
 - Non- recyclable cardboard- shred and soak in water with a drop of detergent
 - Corn Cobs- chop into small pieces, mix with nitrogen rich material (i.e. fruit waste, vegetable scraps)
 - Lime- Causes nitrogen loss and may hurt bacteria, omit from pile or use sparingly
 - Nut Shells- pulverize or shred
 - Glossy Colored Paper- may contribute toxins to compost
- Maintaining Active Composting
 - Microorganism function best at a temperature of approximately 160°F, above this temperature the pile could overheat causing the microorganisms to die off; turning the pile can prevent this. If the material is turned everyday it will take approximately 2 weeks for the composting process to complete.
- Excess Material
 - Once the pile has started nothing should be added to the composter, adding material during composting extends the decomposition time for the entire pile.
 - Excess material should be kept dry—to prevent decomposition, until there is a new pile.

Acceptable Materials

“Green” (adds nitrogen)



Vegetable Waste



Fruit waste



Egg shells

“Brown” (adds carbon)



Paper bags



Paper towels



Cardboard boxes



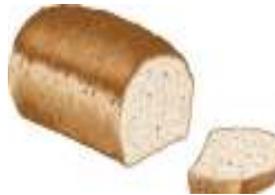
Cereal and milk cartons



Shredded newspaper



Coffee grounds, tea



Bread



Grains



Dryer Lint

Unacceptable Materials



Meat



Oils



Bones



Dairy

Fraternity and Sorority Chapter Composting Agreement

This agreement between _____ and the Office of Residential Services is designed to ensure that the commitment to a composting program is a chapter decision with full chapter support. A composting program is a financial commitment for the university and a long term action oriented commitment on the part of the chapter. The following check-list must be accomplished prior to signing the agreement:

- Chapter representatives have met with the Lehigh Sustainability Coordinator and completed an educational session on the concept of composting. The chapter's general membership understands the steps they will be responsible for when participating in a composting program.
- The chapter has discussed this commitment to composting with their alumni and house corporation leadership and all parties are in support of the program.
- The chapter has committed to creating an officer or chapter representative position that will manage and supervise the composting program for the house on a year to year basis.
- The chapter has met with the chapter Chef and he/she fully understands his/her role in the composting program and they will support and abide by the chapter's composting commitment.
- Chapter representatives have met with Residential Services and determined a location for the composter which has house corporation/alumni approval.
- The chapter understands they will have minor expenses associated with a composting program to pay for materials, signage and cleaning tools.
- Chapter understands that they will receive accreditation credit for the composting program only if it is determined to be a successful program by Lehigh's sustainability Coordinator and the following documentation is completed in support of the program:
 - Compost Creation: Weight Log form
 - Emptied History form
 - 1-2 page year end program summary submitted to the Lehigh's Sustainability Coordinator at the end of each academic year.

The Following Signatures indicate that all check-list items have been met and the chapter is committed to executing a compost program:

Chapter President: _____ Date: _____

Chapter House Manager: _____ Date: _____

Chapter Chef: _____ Date: _____

Chapter House Corp/Alumni Approval: _____ Date: _____

Chapter Compost Coordinator: _____ Date: _____

I have reviewed the checklist with the chapter representatives.

Residential Services Representative: _____ Date: _____

