

Compost Outpost Virtual Tour

Eco City Farms - Bladensburg

Compost Crew is also a partner in the operation of this site.



Part 1: Building the Compost Outpost



Preparing the site for the compost outpost



We used asphalt milling to level the site



The containers arrived at the site



The shipping containers were modified to accommodate composting



The containers were painted for aesthetics and protection



We used bean blocks for the concrete pad walls and storage area



The bean blocks define a space for mixing food waste, leaves, and woodchips prior to aeration in the shipping containers

The concrete pad floor was poured by the crew and volunteers





A six-panel solar array was affixed to the roof of the shipping containers



The output of the six solar panels are combined in a box at the back of the array



Eureka! Success - power from the sun!

In lieu of labor intensive turning of the compost, we installed 4 solar powered air manifolds underneath the shipping containers for compost aeration





The blowers and their associated electronics





A RainBird timer is used to control the 1 hp blowers that push air into the piles

Part 2: Utilization of the Outpost for producing compost

Concrete Pad - Mixing Area

- Food scraps from local residential households are brought directly to a concrete mixing pad where they are inspected.
- All plastic objects (including compostable plastics) are removed.
- Once material is thoroughly decontaminated it is mixed with carbon rich material (leaves and wood chips).
- The entire mix is watered during this process to ensure ~60% moisture content in pile



Before



After





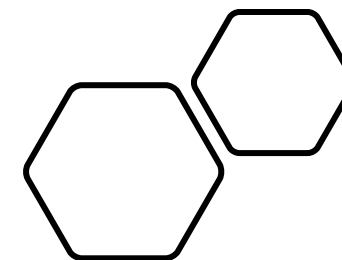
Loading the containers.

Homogenous mix of food scraps, leaves and wood chips that have been thoroughly decontaminated and hydrated are loaded into the bay inside the shipping containers

The compost pile sits inside the bays for 4 weeks where temperatures reach 150 degrees at their peak



After four weeks in the shipping containers, compost is moved to a roll-off container for further decomposition



We monitor CO₂
and temperature





COMPOST OUTPOST PROCESS

PHASE 1 ONE MO.

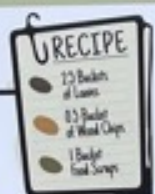
1 PREP MIXING PAD: 20 MINUTES



Use skid loader bucket as measuring cup to make the compost mix.

COMPOST MIX

3:1 Ratio of "Browns" to "Greens"



4 LOAD BAY 1

ADD WATER



Just 60% Moisture Content

3 MIX + WATER

20 MINUTES

MIX SUPER WELL

AND LET THE
COMPOST PARTY
BEGIN!



Pile compost mix
CENTERED + ROUND

This is where
HOT COMPOSTING
starts...



ROOM TEMP.

DAY 0

DAY 1

DAY 2

150°F

PARTY RULES:

1 Keep pile
OXYGENATED



2 Keep pile at
135-145°F
for 3 DAYS min.



To make sure our compost piles are constantly oxygenated, we've drilled small holes in the base of each bay, with pipes going out to the back of the container, where air blowers (powered by solar panels!) add oxygen into the piles at regular intervals!

Beneficial microbes
THRIVE in a hot
and diverse
environment. Think
of the pile as a big
party, the moisture
from the compost as
"the juice," and the
microbes as super
happy guests!



5 COVER



COVERED CONTAINER

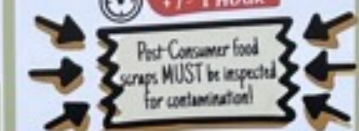
Keeps out animals, rain,
and other elements.

WOOD CHIPS

Add a layer of protection by
keeping moisture in, UV rays out,
and minimizing bad odors.

2 PRE- CONTAMINATION SORT

1-1 HOUR



Post-Consumer food
scraps MUST be inspected
for contamination!

RULE #1:

NO "COMPOSTABLE"
PLASTICS



To make quality compost for food production,
"compostable" plastics are not accepted as
they do not completely break down.



IF WE DO
FIND THEM...



THEY GO BACK ON THE TRUCK, AND
ONTO ANOTHER FACILITY.

AFTER
THOROUGH
SORTING



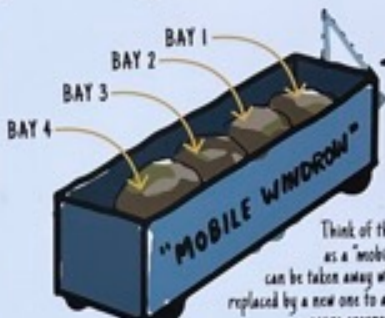
ADD MORE "BROWNS"



PHASE 2 2-6 MO.

WEEK 5 =

MOVE BAY 1 PILE TO NEW
LOCATION, where hot composting
continues, is contained and oxygenated.



Think of this giant roll-off
as a "mobile window" that
can be taken away when full and
replaced by a new one to allow for
more composting.

✓ READY TO BE
FIELD APPLIED

COMPOST IS READY
WHEN IT'S GOTTEN HOT AND COOL

ALL WHEN COMPOST IS AT
"AMBIENT TEMPERATURE"



WEEK 2 = LOAD BAY 2
WEEK 3 = LOAD BAY 3
WEEK 4 = LOAD BAY 4

SCAN THIS CODE TO
LEARN MORE ABOUT
WHAT WE DO HERE
AT ECOCITY FARMS!



Thanks for listening!!



The compost outpost occupies 5000 square feet