Whidbey Compost Collective

Breaking it down since 2022

Introduction

Whidbey Compost Collective was established in 2022 and officially became a worker-run 501c3 nonprofit in 2024.

Mission

Our mission is to keep food scraps out of the landfill by turning them into nutrient-rich compost for local use. Through a decentralized network of collection/processing sites, we can deliver long-term environmental and economic benefits.

Values

Our values prioritize protecting the environment and supporting social equity. We embody and desire to operate transparently and to intentionally step away from extractive systems.

- We are committed to challenging oppressive systems by exploring and adopting new ways to empower marginalized species and humans.

- We are committed to repurposing as many materials for reuse in our infrastructure as possible.

The Food Scrap Problem

Organic material in an anaerobic setting (such as landfill) turns into methane, a greenhouse gas that is many times more potent than CO2 over its first 20 years in the atmosphere.

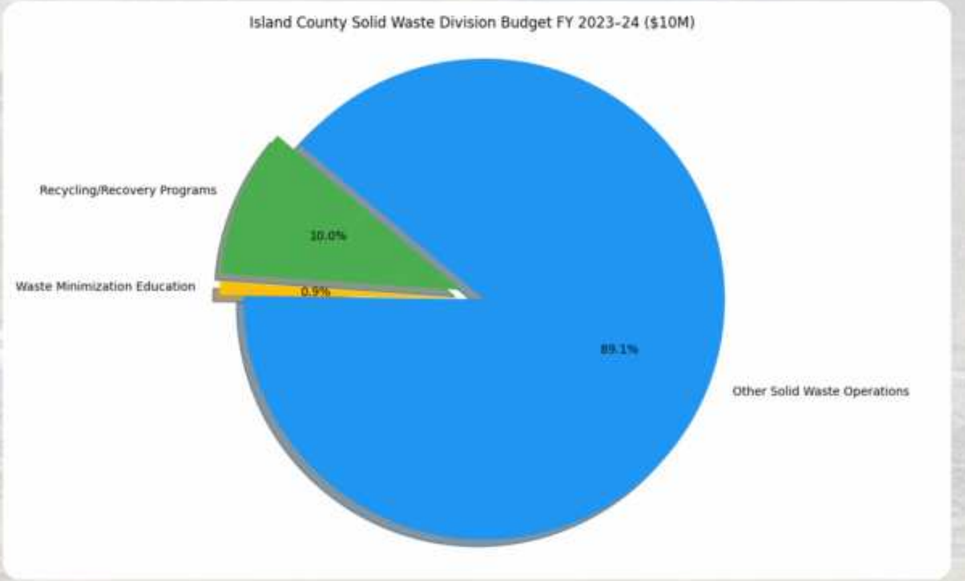
Trash Path

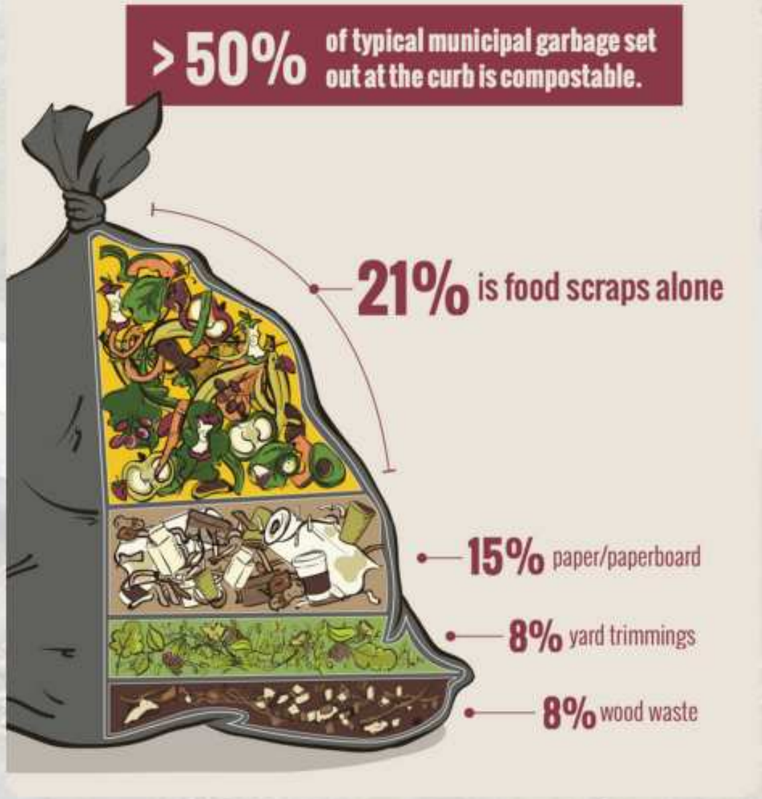
A costly journey to a promblematic endpoint

David Haskell, “Island County’s Wasted Opportunity”

Problems with Current System

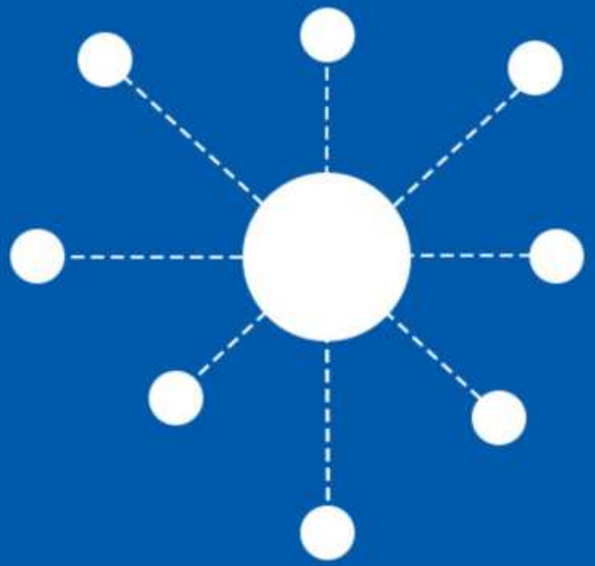
- No organics diversion
- Environmental outcomes
- Expensive (pay to import nutrients, pay to export organic “waste”)
- Low resilience in tumultuous times
- Single stream challenges
- Legal requirements of one hauler/county
- Knowledge gaps in households and institutions



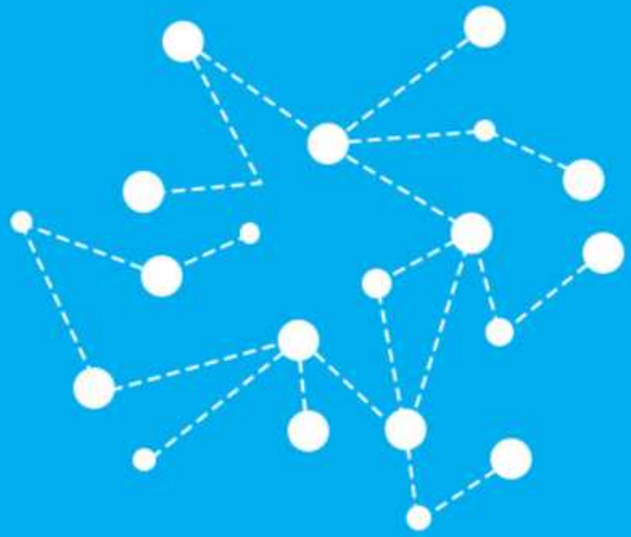


SOLUTIONS

CENTRALIZED



DECENTRALIZED



DECENTRALIZED SYSTEM

In centralized composting systems, organic material of an entire city is composted at a single plant. Whereas, in decentralized composting systems, organic material is composted at the household level, community level, and decentralized small plants

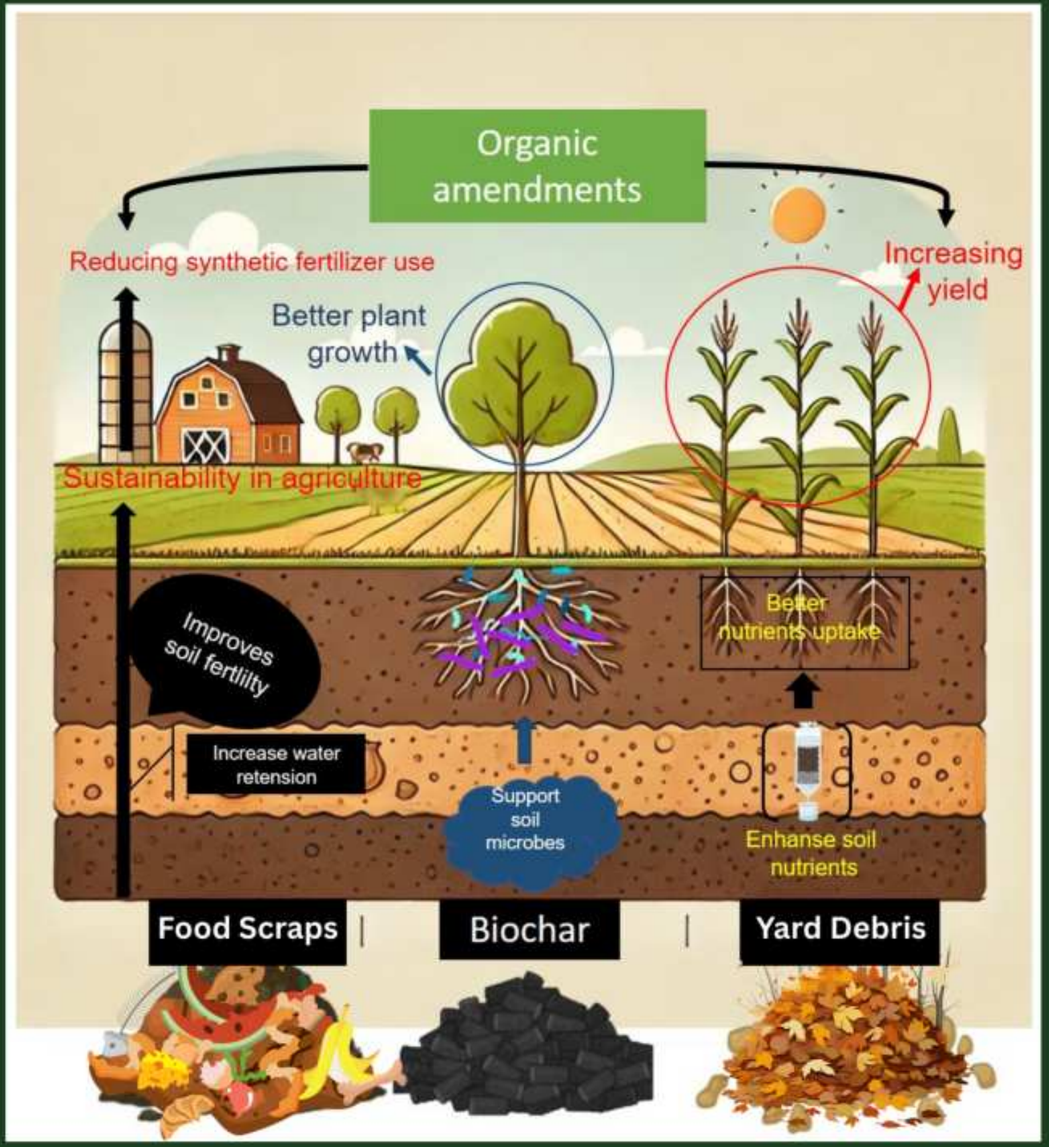
Jakki Narasimha Rao, Tanushree Parsai, “A comprehensive review on the decentralized composting systems for household biodegradable waste management”, Journal of Environmental Management, Volume 345, 2023

One part of the puzzle

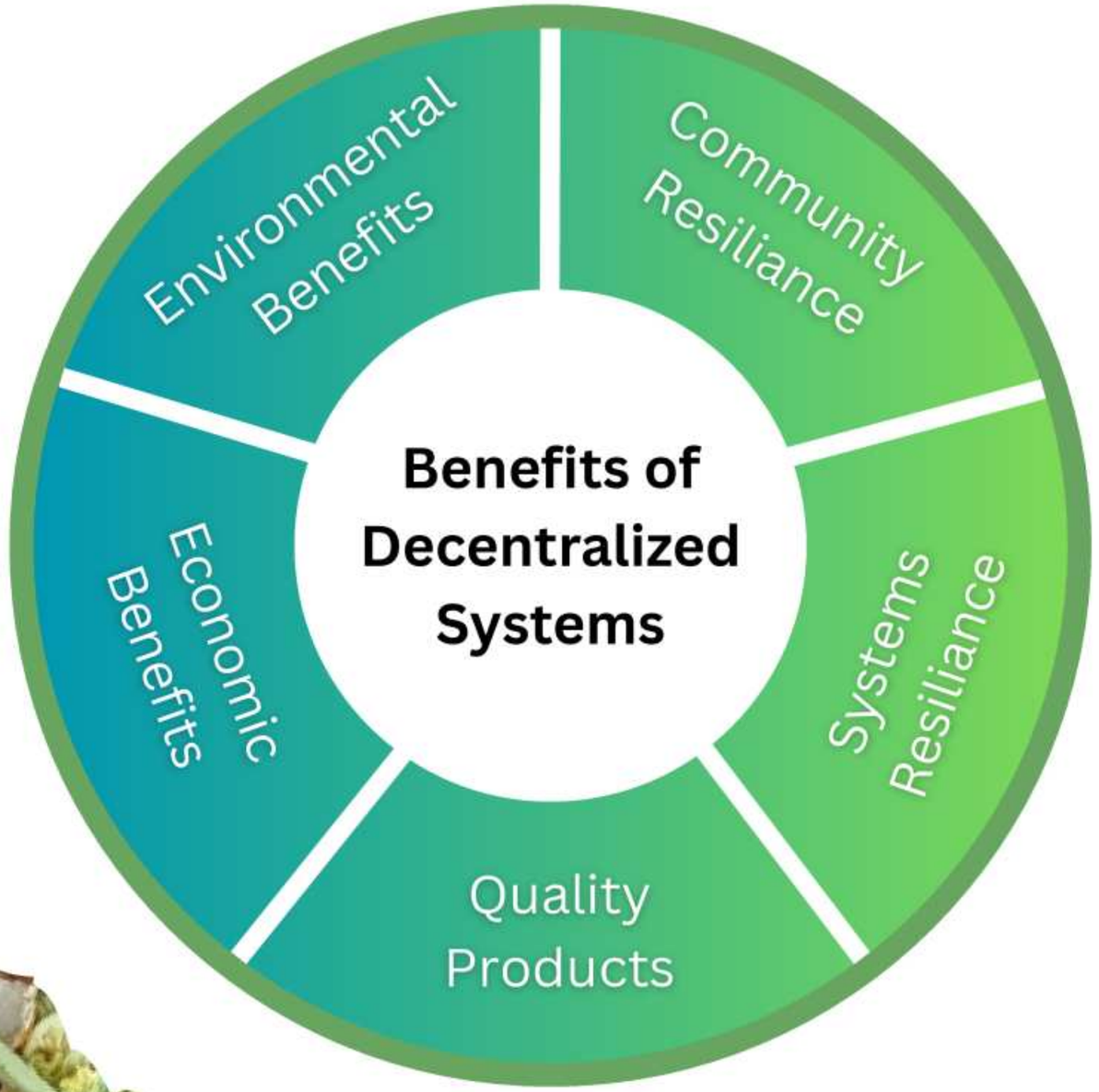
We envision a network of processing and collection sites that:

- Divert all organic and non-organic material from the waste stream
- Benefit Whidbey's environmental and economic systems

We are a piece of that puzzle. Our role is to divert food scraps within a decentralized network of businesses and organizations that aim to eliminate waste by composting, repurposing, recyling.



SOLUTIONS THAT BENEFIT OUR COMMUNITY



ENVIRONMENTAL

- Keeps processing sites close to the source
- Minimizes transportation costs
- Minimizes fuel consumption and GHG emissions
- Flexible and adaptive solutions, tailored to needs of South Whidbey Island

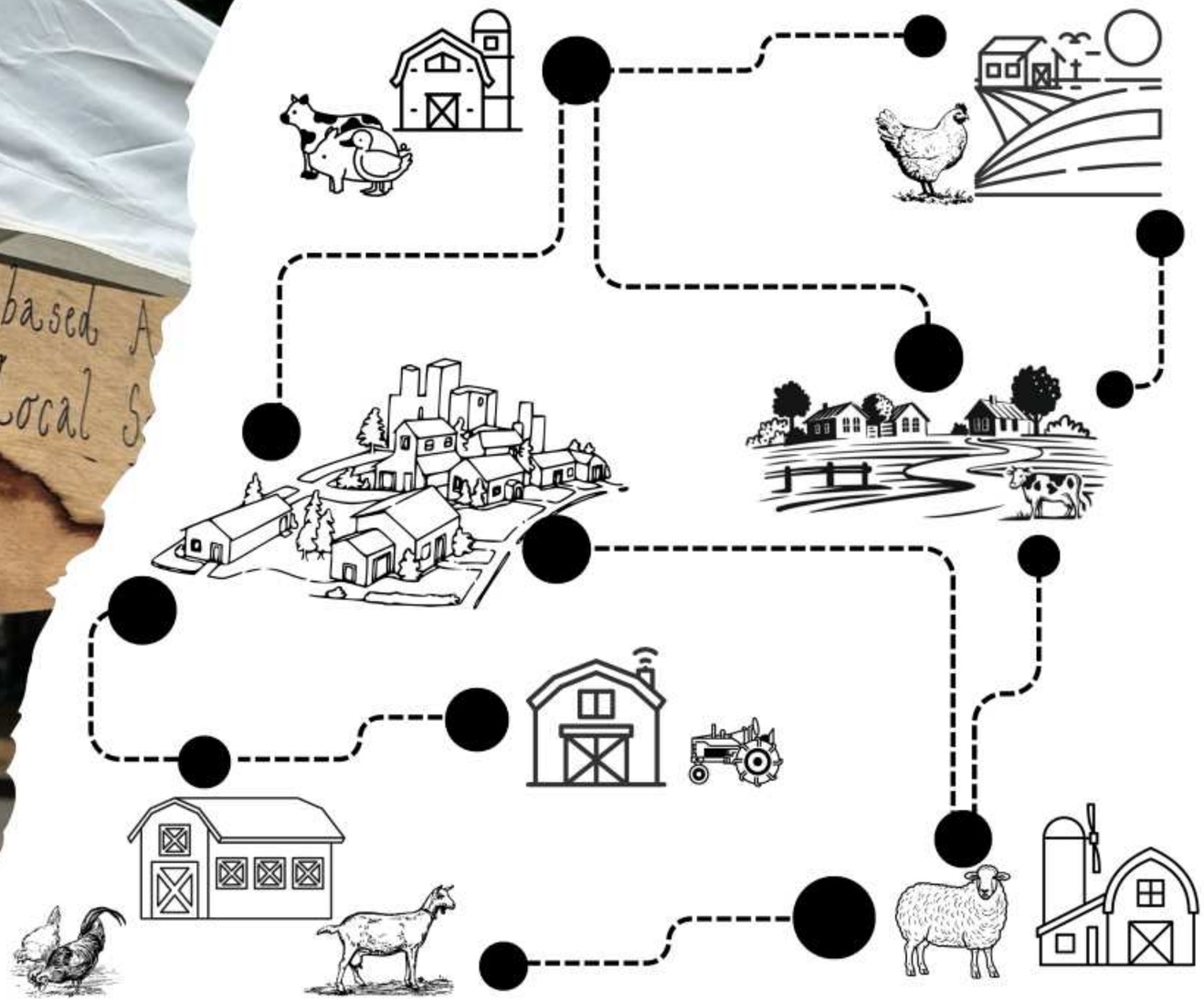
COMMUNITY AND SYSTEMS RESILIENCE

- Foster greater community engagement
- Participation promotes a sense of ownership and responsibility
- Strengthens local food systems

ECONOMIC BENEFITS

- Local employment, Right Livelihood
- Supports sustainable agriculture
- Encourages innovation
- Results in quality products and services

WHIDBEY COMPOST COLLECTIVE'S MODEL



WHIDBEY COMPOST COLLECTIVE

Collection and Processing sites

- **Grocery Stores**

- **Municipal sites and Schools**
  - Langley Wastewater Treatment Facility
  - Transfer Stations
  - Public and private schools

- **Farms**
  - Rainy Day Flora
  - Huckleberry Hill Farm
  - Farms with CSAs (Drop and Process)

- **HOAs (Whidbey Prepares)**

WHIDBEY COMPOST COLLECTIVE

Feedstock Material

- Residential food scraps, must be drop-off

- Business food scraps, can be pick-up

- Arborist Chips, browns

WHIDBEY COMPOST COLLECTIVE

ACCEPTED MATERIALS

- Fruits, Vegetables including citrus
- Meat, Cheese, Small bones
- Trace amounts of food soiled paper (tea bags, coffee filters, napkins)
- Wooden utensils (cutlery, stir-sticks, toothpicks)

NOT ACCEPTED MATERIALS

- No produce stickers, ties or rubber bands
- No 'compostable' plastics
- No wax paper
- No pet waste
- No large bones
- No super moldy or rotten food
- No excess grease

whidbeycompostcollective@gmail.com

WHIDBEY COMPOST COLLECTIVE

Our Methods

Bokashi is an anaerobic composting process, where food scraps are layered in an airtight container with naturally inoculated grain. The inoculated grain and absence of oxygen allows these microbes to ferment the waste, producing a nutrient-rich pre-compost within a few weeks.

WHIDBEY COMPOST COLLECTIVE

Our Methods

Continuous Flow Vermicomposting is designed to provide a steady, uninterrupted stream of high-quality worm castings by continuously adding pre-treated food scraps to the top of the bin while simultaneously collecting mature castings from the bottom. This process is facilitated using rotating tines that pull the finished material down into collection containers, which allows us to harvested without disturbing the worm population.

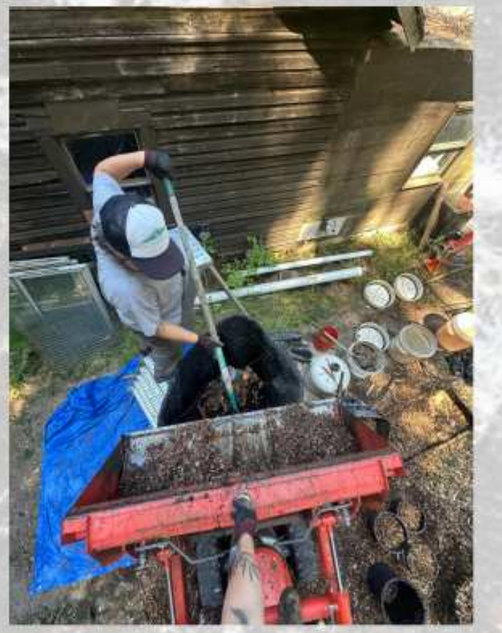
WHIDBEY COMPOST COLLECTIVE

Our Methods

The Johnson-Su Bioreactor is a cost-effective method that involves layering food scraps and woody biomass (and biochar), in a balanced ratio to create an optimal environment for microbial activity.

Following a thermophilic heating process, the system maintains moisture and temperature, allowing fungi and microbes to break down organic material over 9-12 months.

The no-turn method preserves fungal networks, enhancing soil structure and long-term carbon storage.




160
180
200

600 + pounds of concentrated soil amendment

CONSULTATION AND EDUCATION

Whidbey Compost Collective offers **consultation** services to residents and businesses interested in composting solutions

We believe that educating students and helping them create their own composting systems on campuses, will help shift the tide towards a more sustainable future. Students also bring their knowledge home to their families!

TESTING FOR QUALITY

RESULTS

BACTERIA

SAMPLE: 968UG/G
DESIRED RANGE:>300 UG/G

Bacteria containnutrients, especially nitrogen, that are released upon consumption or expiration.

ACTINOBACTERIA

SAMPLE: 0.19ug/g
DESIRED RANGE:0

Actinobacteriaconsumeanddecompose tough cellulose and lignon. Responsible for the "earthy" aroma of a forest.

FUNGI

SAMPLE: 149 UG/G
DESIRED RANGE: >135 UG/G

Saprophytic fungi break down woody tissues such as stalks, sticks, and leaves.

F/B RATIO

SAMPLE: .15 DESIRED RANGE: N/A

Early successional plants such as lettuces, greens, and short-lived annuals grow in bacterial dominant soils. Row crops, tall grasses, and annuals with longer life spans grow best in soils with equal F/B ratios. Woody vines, shrubs, and trees grow best in fungal dominant soils.

RESULTS

OOMYCETES

SAMPLE: 0
DESIRED RANGE: 0

Oomycetes are generally pathogenic and undesirable.

FLAGELLATES/AMOEBAE

SAMPLE: 146,736 / g
DESIRED RANGE: >10,000 > g

Both flagellates and amoebae consume bacteria, releasing the nutrients within in a plant-available form

CILIATES

SAMPLE: 0
DESIRED RANGE: 0

The presence of ciliates is an indication of low oxygen or anaerobic conditions. They are undesirable.

NEMATODES

SAMPLE: 480 BF / g
DESIRED RANGE:>100/g

Nematodes are separated by feeding groups: bacterial-feeders, fungal-feeders, predatory, omnivorous, and root-feeders (parasitic). They cycle nutrients in the soil through the consumption of their predators.

BF=Bacterial Feeder FF=Fungal Feeder
RF=Root Feeder

NOTES & RECOMMENDATIONS

Looking great, definitely something to be proud of!

Photos on this page are from your sample.

URBAN WORM COMPANY

Thank you for your order!

Washington Food Waste Reduction Goals

1,216,779 tons
of edible and inedible food waste is generated annually in Washington

2015 Baseline Data

By 2025, we will:

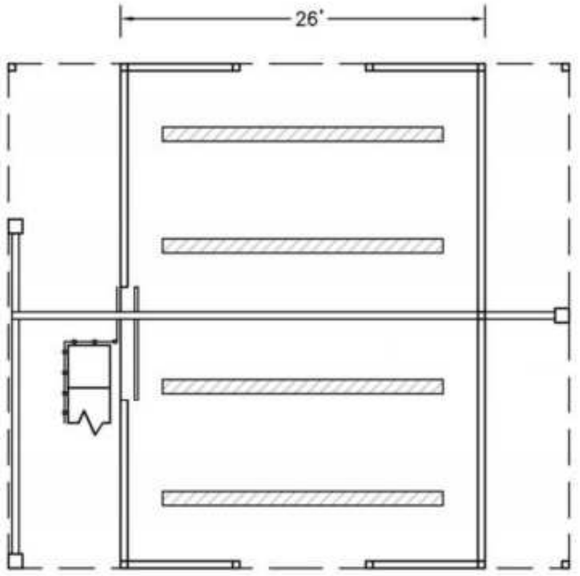
Rescue **78,012 tons** of edible food waste for human consumption

By 2030, we will:

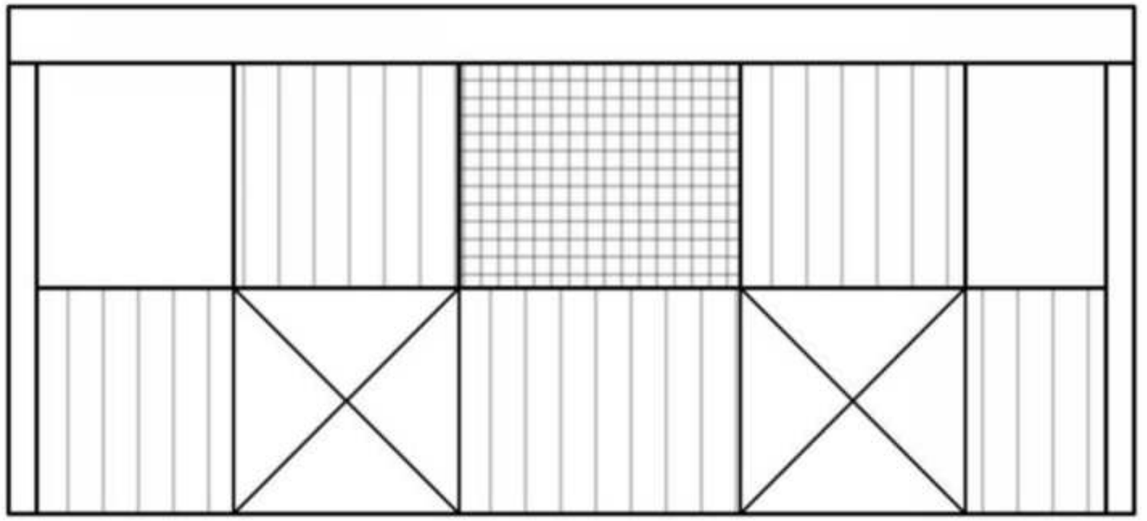
Reduce edible food waste by at least **195,032 tons** (50%)

Reduce total annual food waste by at least **608,390 tons** (50%)

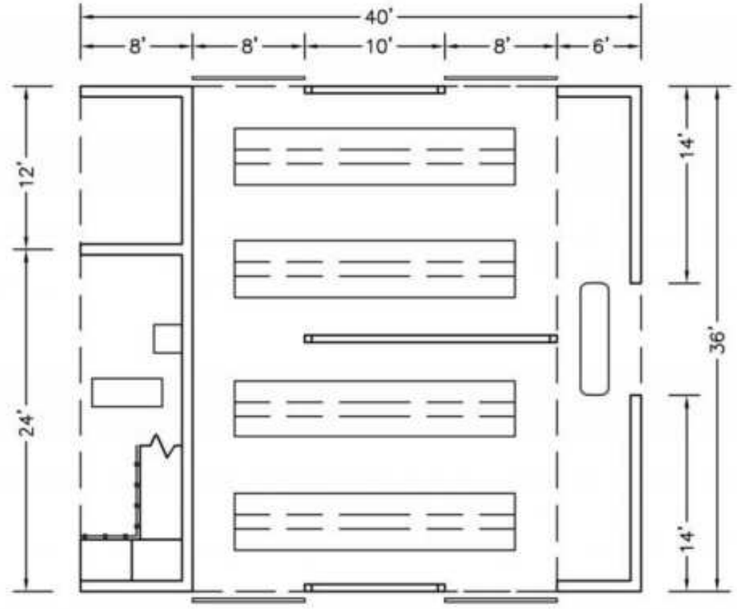

You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete.
R. Buckminster Fuller



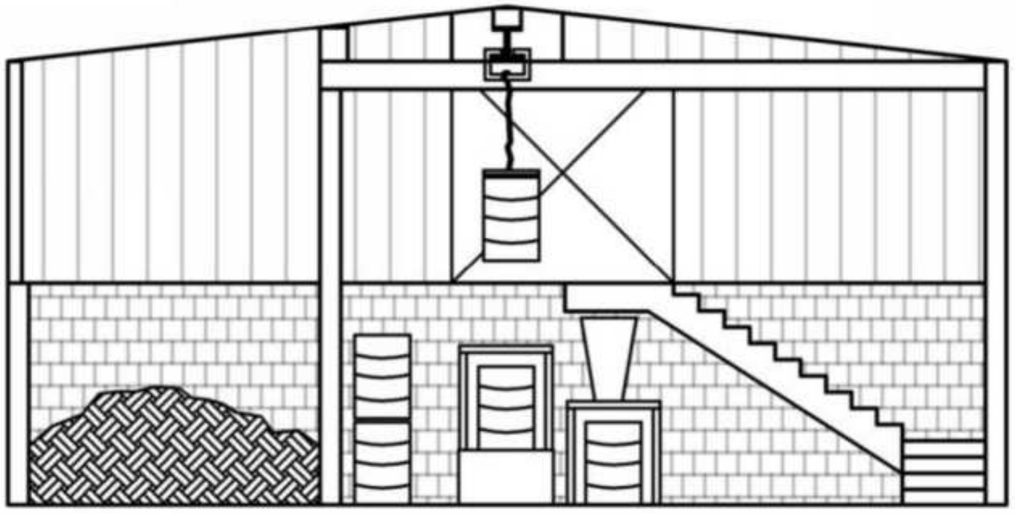
TOP FLOOR



ELEVATION A

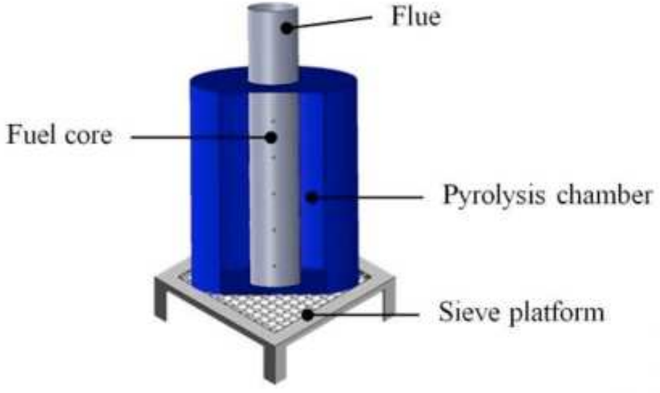


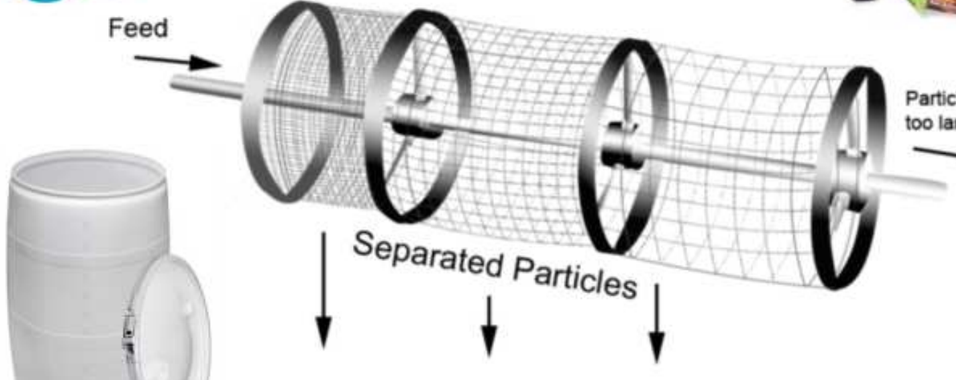
BOTTOM FLOOR



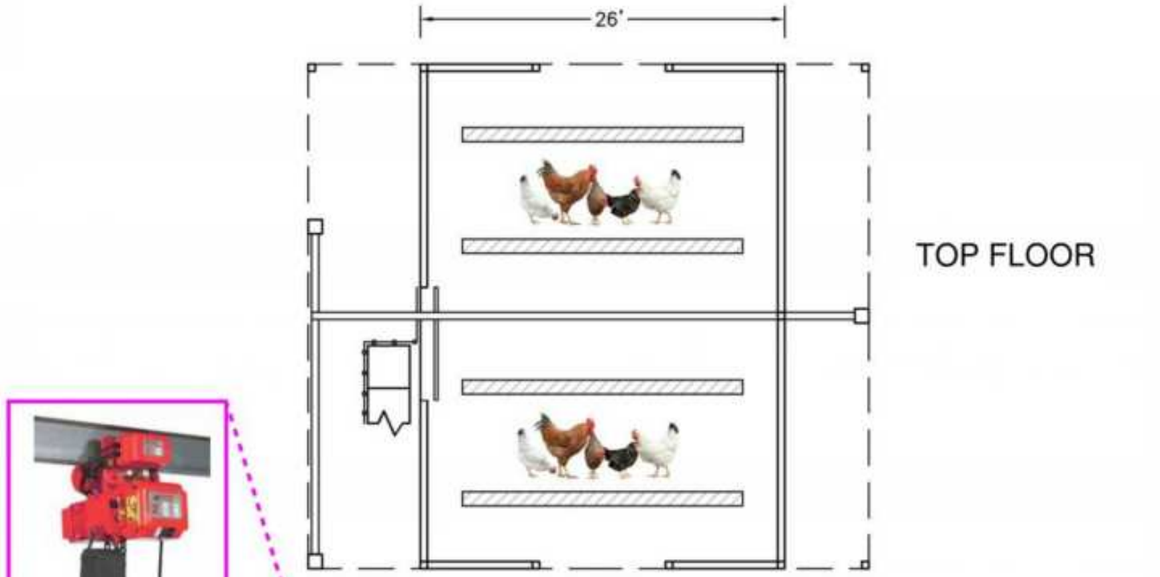
ELEVATION B

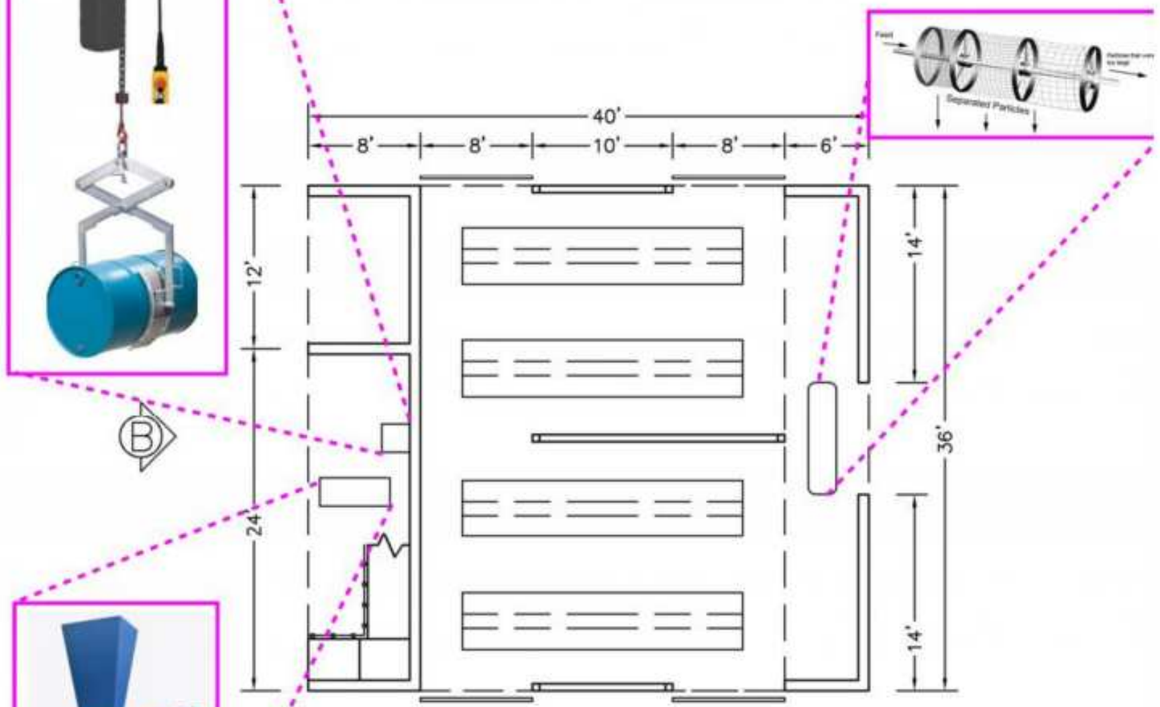

NEWS

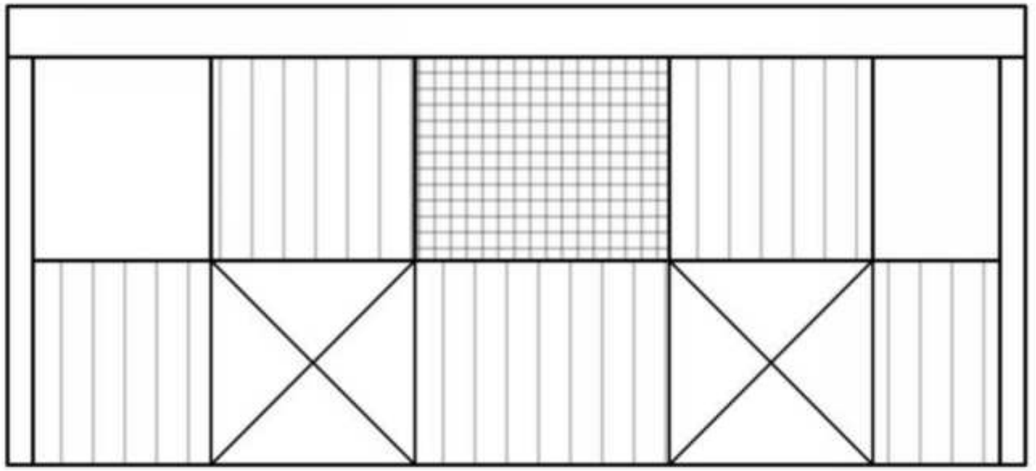

Flue
Fuel core
Pyrolysis chamber
Sieve platform


Feed
Separated Particles
Particles that were
too large


compost







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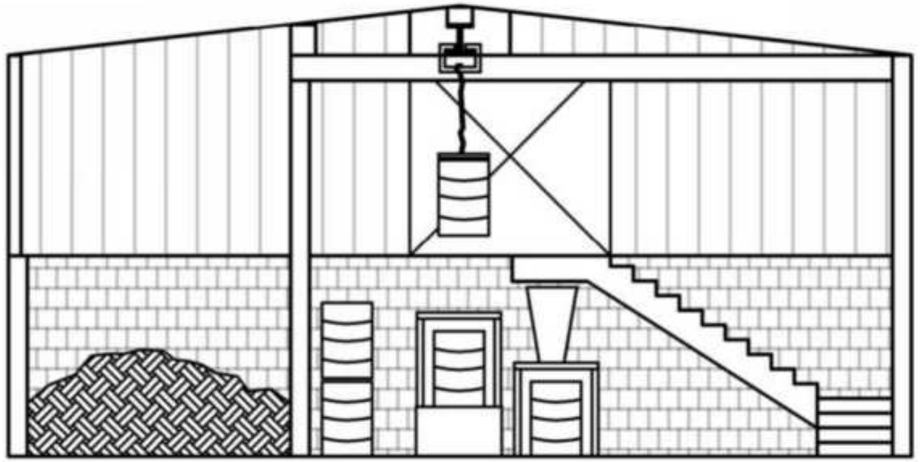
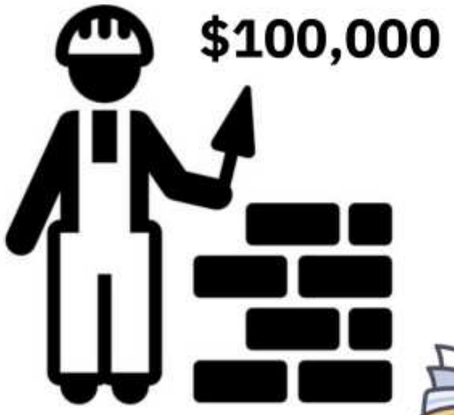


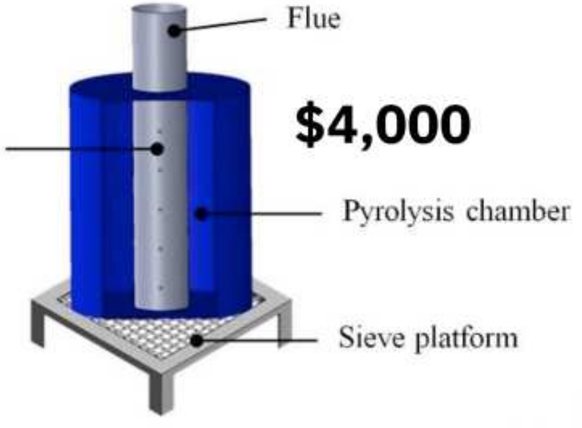
ELEVATION B


$100,000


$20,000


$4,000


$10,000
NEWS


Flue
$4,000
Fuel core
Pyrolysis chamber
Sieve platform

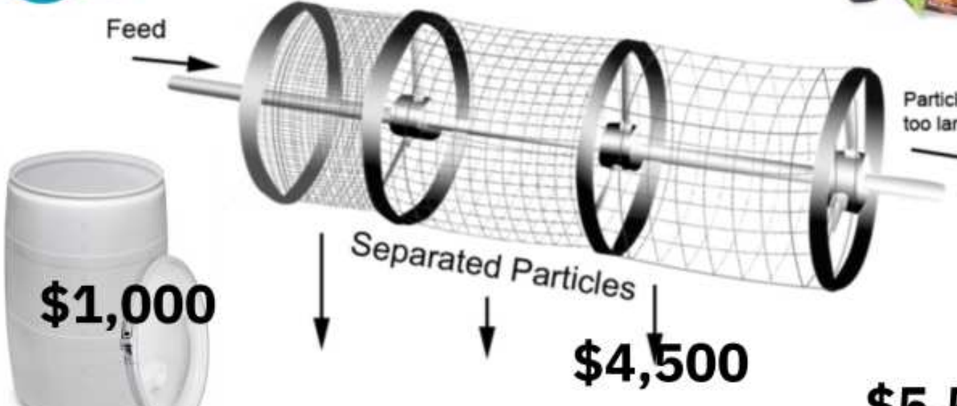

$15,000


$28,000


$1,500


$3,500

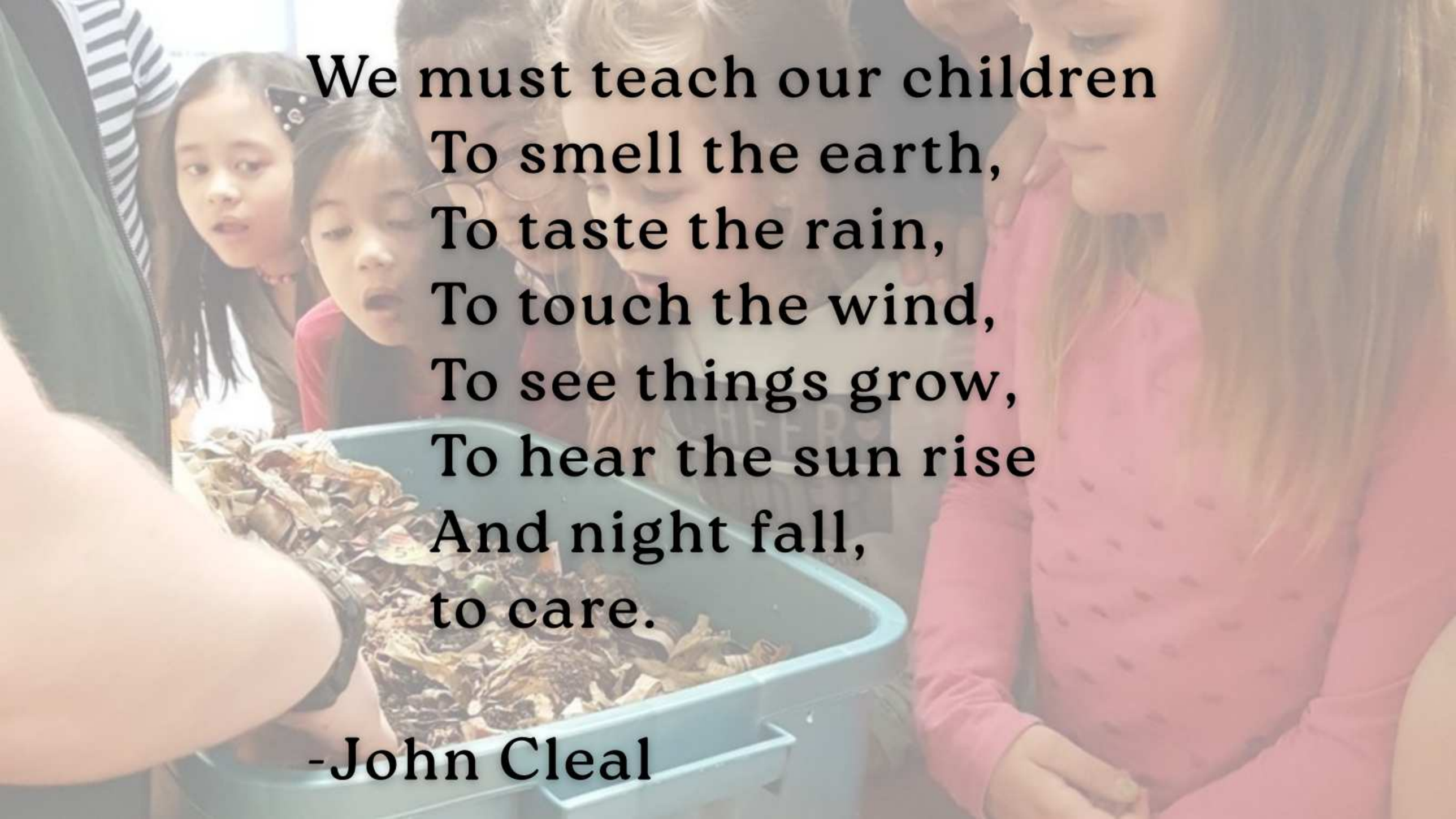

$1,000

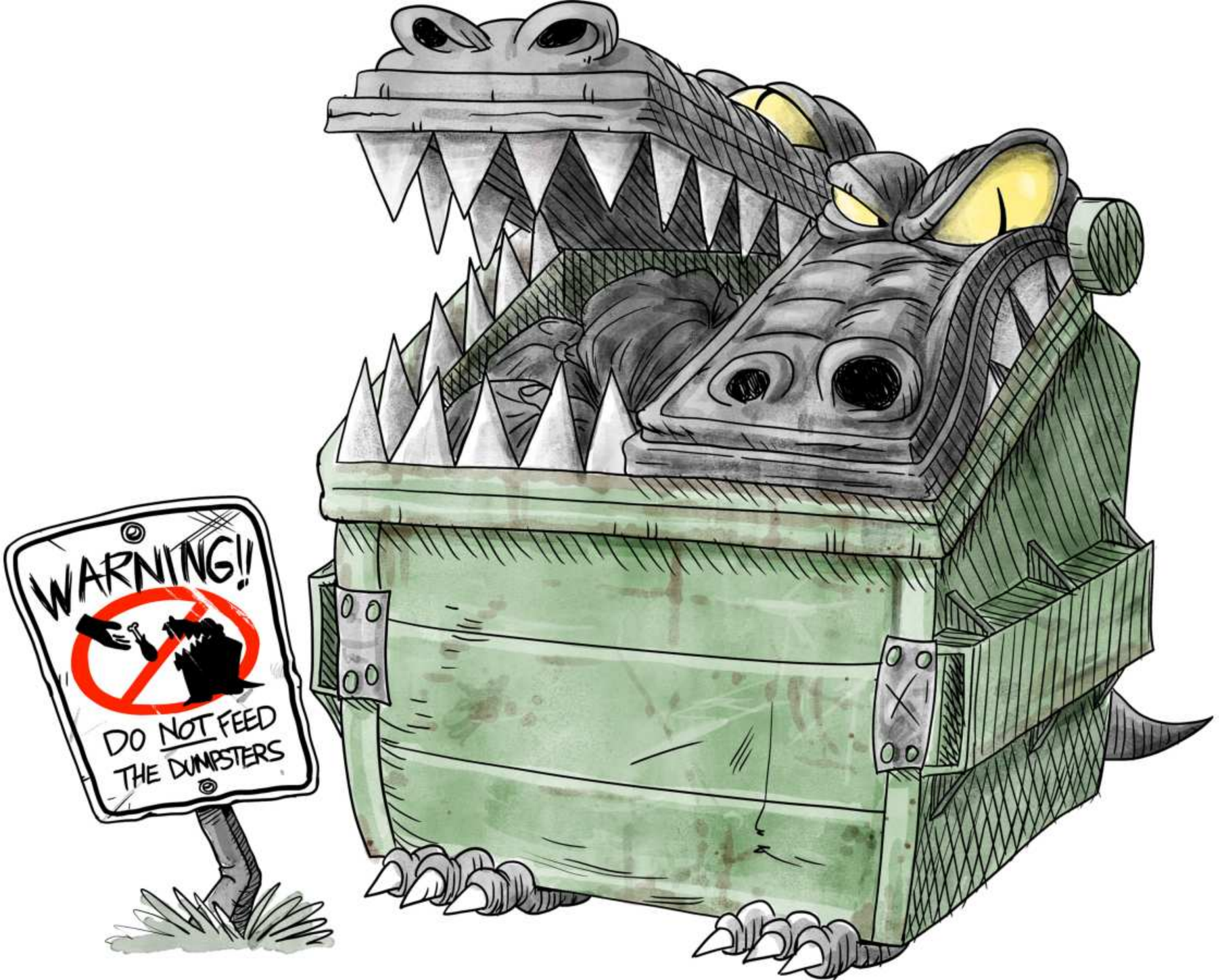

Feed
Particles that were too large
Separated Particles
$4,500

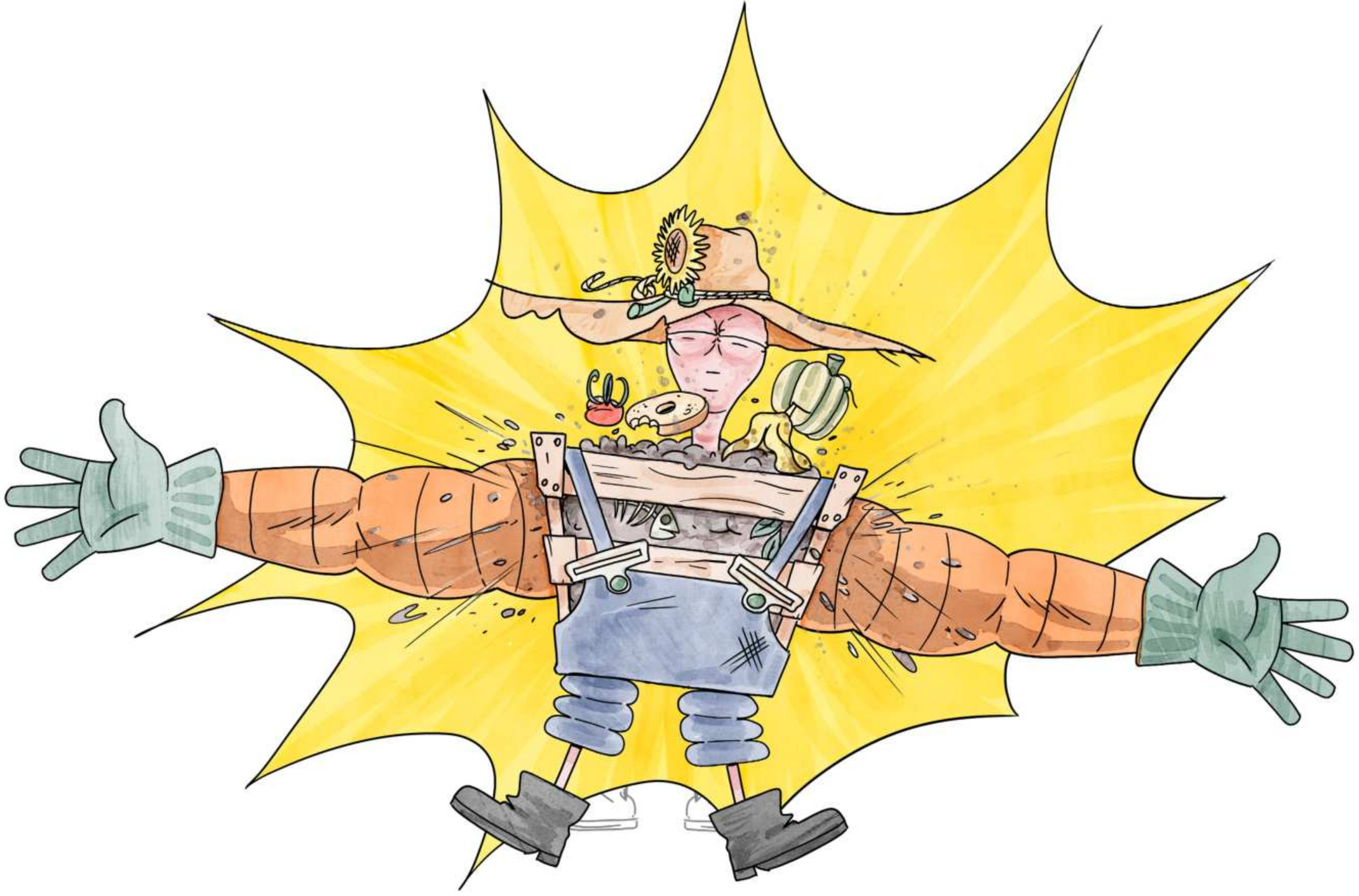

$1,000

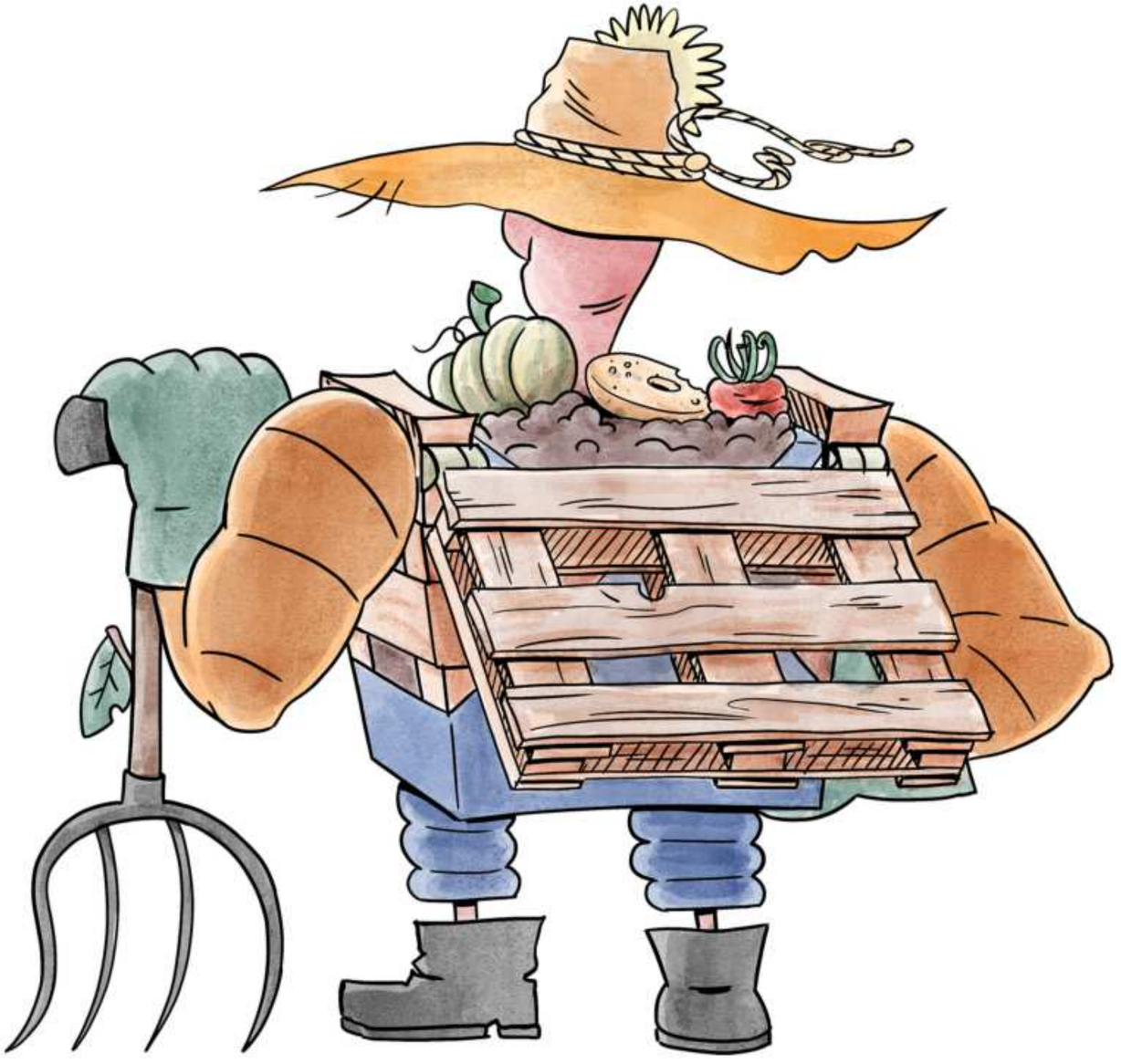

compost
$5,500


$3,000


We must teach our children
To smell the earth,
To taste the rain,
To touch the wind,
To see things grow,
To hear the sun rise
And night fall,
to care.
-John Cleal


WARNING!!
DO NOT FEED
THE DUMPSTERS






“The best time to plant a tree is 20 years ago.
The second best time is now.”
Chinese Proverb

WHIDBEY COMPOST COLLECTIVE CAN USE YOUR SUPPORT

venmo

Other Ways to Support Us

- Helping hands: Build a Johnson-Su with us on September 10th whidbeycompostcollective@gmail.com
- Legal Expertise: Navigating county laws, copyright patents, etc.
- Website design and maintenance
- Homesteaders or farms that would like to host a worm bin or Johnson-Su

Sign on the member waitlist (nearing launch!)

Conversation