

Day 22

Biological Strategies

The Dandy Lions
60 POINTS

Instagram Post Link:

https://www.instagram.com/p/DQJMPCsDvUr/?img_index=7&igsh=NTc4MTIwNjQ2YQ
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Inspiration: Leafcutter Ants

Leafcutter ants cut leaves and bring them to their underground colonies, not to eat directly, but to feed a fungus they farm.

- That fungus breaks down the leaves and becomes the ants' food source.
- In nature, nothing is wasted — food scraps become nutrients for new food.

Bio-Inspired Solution:

Small Steps is a community food recycling system inspired by the way leafcutter ants manage and reuse organic material.

- Goal: Turn local food waste into fresh produce for the community.
- Inspired by: The circular nutrient system of leafcutter ant colonies.

How It Works

1. Collection (The Foraging Phase):
 - Local residents deposit their food scraps (fruits, veggies, coffee grounds, etc.) into community AntCycle Bins.
 - These bins are designed with ventilation patterns inspired by ant tunnels, to allow air circulation and prevent odor.
2. Processing (The Fungus Garden Phase):
 - Inside each bin, a bio-reactor unit uses composting microbes or fungi (like mycelium) to break down waste efficiently.
 - Heat sensors and moisture regulators (like ant colonies maintain humidity) keep the compost active.
3. Rebirth (The Colony Benefit Phase):
 - The compost created from these bins is used to grow community gardens or supply local urban farms.
 - Residents who contribute food waste receive “Step Points” redeemable for free produce, creating an incentive loop, just like how ants benefit from collective work.