



Circular Systems – Farm to Fork



Introduction To Circular Systems

“A process in which food waste is collected, recycled into compost, then, the compost is use to grow food which is served at a dining hall and where food waste is produced again and the system starts again.”

- Gerardo Soto (Food Waste Experts)





Partnership Components

Frostburg State University

Chartwells

Food Waste Experts

Frostburg Grows

chartwells
where hungry minds gather



Frostburg State University

- Located in Frostburg, Maryland
- Founded 1900, State Teachers College (1935), Frostburg State College (1963), Frostburg State University (1987).
- Student Population of over 5,000.
- Princeton Review's Guide to Green Colleges 2016



“We will promote positive changes in the behaviors and actions of Frostburg State University students, faculty, staff, and surrounding community members that will reduce our environmental impacts and create sustainable solutions for our daily lives”
– Vision For Sustainability

Chartwells

- Higher Education Division of Compass Group USA
- Industry Leader in Sustainability and Corporate Social Responsibility
- Fortune Magazine Ranked 33rd “Companies Changing the World”
- Volume and Purchasing Power Translates Into Sustainability Influence

Sustainability Initiatives

- Project Clean Plate
- Food Recovery Network
- Trim Trax
- Global Animal Partnership – Poultry Purchasing
- **Love Food Not Waste** - Composting

Food Waste Experts & Rocket Composter

- Started with Rocket Composter in early Nineties by Gardener/Inventor John Webb
- Specializes in On Site Food Waste Solutions
- Gobi, Dragon, Dehydra, CHiP

“We believe that food waste can be used as a resource rather than being a costly disposal problem which is why we offer products that not only eliminate waste but turn it into something valuable too. We are passionate about our products but even more passionate about dealing with food waste in a sustainable way.”



A900 Rocket Composter



- In-Vessel Compost Machine
- Plate Scrapings, Meat, Fruit & Vegetables, Fish, Bread, Egg and Dairy
- 4-8 Weeks Start Up Process
- 1750 Liter Capacity/460 Gal.
- Food Waste to Compost 14 Days
- 2-3 Weeks Maturation Time



Decomposition Process

- Enhances natural biological process (Aeration, 65% Moisture, Temperature)
- Heat Zones
 - 40-110°F – *Mesophyllic Stage* (bacteria, nematodes)
 - 110-190°F – *Thermophyllic Stage* (pathogens, larvae, seeds)
- Exhaust Ventilation
- Rocket Controls all factor to speed process to 14 Days



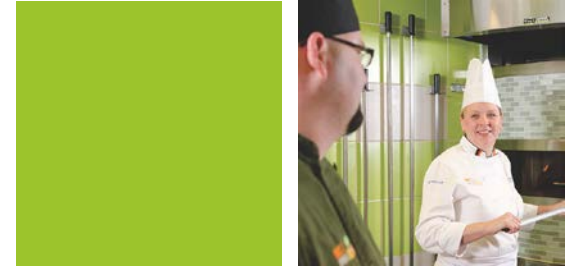
Frostburg Grows

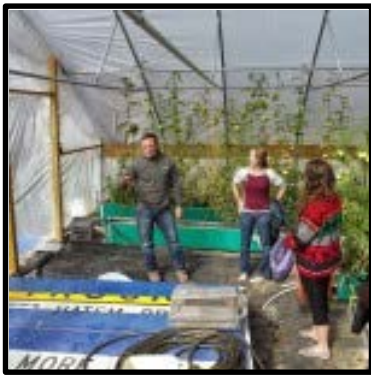
- 2014 Recipient of the Maryland Sustainable Growth Award.
- 5 acre site
- 6 large high-tunnel greenhouses
- Rain water irrigation, aquaculture



Project History

- Installed Jan 2015
- Divert 1,500 – 1,900 lbs/wk.
- 76% Campus Waste Diversion
- 100% Associate Involvement





Process

- 1.) Student Waste
- 2.) Pre / Post Production
- 3.) Waste Collection
- 4.) Pulper / Food Pulp
- 5.) Centrifuge / 80% Moisture
- 6.) Compost / Woodchips



Question & Answer





Special Thanks

Food Waste Experts
Frostburg State University
Chartwells
Frostburg Grows
NYSDEC

