IDEATE. ANALYZE. MITIGATE:
LESSONS FROM PACKAGING LIFE CYCLE ASSESSMENTS

27.February.2020
How many companies have committed?

470
Companies
Committing to Action

1799
Commitments
Why Commit To Reducing the Climate Impact of Packaging?

On average, packaging accounts for about 5% of the energy used in the life cycle of a food product making it a significant source of greenhouse gas emissions.

Learn more about how to reduce your packaging’s impact at: https://www.climatecollaborative.com/packaging

Climate Collaborative Webinar Resources Include:

• Right Side Up: The Lowdown on Packaging Lifecycle Climate Impacts and Opportunities
• A Delicate Balance: The Science, Art, and Business of Sustainable Plastic Packaging Design
• Yin and Yang: Understanding and Conveying Advantages of your Sustainable Product Packaging

See more at: https://www.climatecollaborative.com/packaging_resources
THANK YOU TO ALL OF OUR DONORS!

Alter Eco
Annie’s
Associated Labels and Packaging
Aurora Organic Dairy
Clif Bar & Company
Danone North America
Decker and Jessica Rolph
Dr. Bronner’s Eatsie.us
Gaia Herbs
General Mills
GimMe Snacks
Griffith Foods
Grove Collaborative
Guayaki
Happy Family Organics
Harbar Harvest
Harvest Market
INFRA
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Justin’s
KeHE
Lotus Foods
Lundberg Family Farms
MegaFood
MOM’s Organic Market
Mountain Rose Herbs
National Co+op Grocers
Natural Habitats
Nature’s Path
New Hope Network
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Stonyfield
Strategic Rise Partners
Straus Family Creamery
Studio Fab
Sweet Additions
Tiger Cool Express
Traditional Medicinals
Trayak
Whole Foods Market
Our Speakers

**Moderator**

Lisa Spicka  
Strategic Partnerships Director  
Sustainable Food Trade Association (SFTA)

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**Speakers**

Prashant Jagtap  
CEO  
Trayak

Jen-ai Stokesbary  
Director of Sustainability  
Boulder Organic Foods

Katy Radtke  
Product Development Manager  
Theo Chocolate

Arpit Bhopalkar  
Co-Founder & CEO  
Bhoomi
IDEATE. ANALYZE. MITIGATE: LESSONS FROM PACKAGING LIFE CYCLE ASSESSMENTS
Agenda

- Introductions
- Life Cycle Thinking
- Packaging Assessment Project Overview
- Packaging Sustainability Improvements
  - Boulder Organic Foods
  - Theo Chocolate
  - Bhoomi Cane Water
- Call to Action
Vision: “Enable all companies to design & manufacture their entire product portfolio using sustainable strategies.”

Mainstreaming Sustainability

EcolImpact  COMPASS  SCORE
Life Cycle Thinking

Life Cycle Assessments calculate environmental impact of a product/package from sourcing, manufacturing, distribution, use, and disposal.

<table>
<thead>
<tr>
<th>LCA Data Flow</th>
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<tbody>
<tr>
<td>Life Cycle Inventory (LCI)</td>
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<tr>
<td>Life Cycle Impact Assessment (LCIA)</td>
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<tr>
<td>Life Cycle Assessment (LCA)</td>
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Source: GreenBlue®
Packaging Assessment Project

The Climate Collaborative

Trayak

Sustainable Packaging Journey

Package Committed Company
Packaging Assessment Project Steps

1. Define Packaging Change
2. Respond to Call to Action
3. Selection Process
4. Data Collection
5. Modeling
6. Analyzing New vs Old
7. Create Case Study
Switch secondary packaging to pad with shrink

Switch to a plant based film for their chocolate/candy packaging

Switch to a sugarcane-based bio HDPE bottle
Data Collection and Modeling

• Packaging System Data Request sent to companies

• Packaging Information Needed for Baseline and New Design
  • Materials
  • Mass of Materials
  • Conversion Processes
  • Packaging Type
Measuring Package Environmental Impact

**COMPASS LCA Indicators**
- FOSSIL FUEL CONSUMPTION
- GREENHOUSE GAS EMISSIONS
- WATER CONSUMPTION

**Additional Packaging Attributes**
- REUSED OR RECYCLED CONTENT
- CUBE UTILIZATION
- MANUFACTURING COST

**SCORE®**
Track Sustainability Goals
Switch secondary packaging to pad with shrink
In 2006 I was searching for a fresh, pre-made soup in my local grocery store. As I read the ingredient lists, I felt a chill: preservatives, flavor enhancers, emulsifiers and artificial ingredients. I was shocked.

How did we get so far away from simple, nourishing, homemade soup? How hard could it be to make soup with all organic ingredients?

I started cooking soups for family and friends to recreate the recipes we remembered and in 2008 my efforts became Boulder Organic Foods. Since then, our scratch-made organic and gluten-free recipes have put real soup on the table for families nationwide.

Kate Brown
OUR SECONDARY PACKAGING

RSC “Regular Slotted Container”
LOOKING FOR AIR
Retail Pack Pallets
PROPOSED SECONDARY PACKAGING

Corrugated Pads with Shrink Wrap
Analyzing New vs Old – Boulder Organic Foods

Measuring environmental impact of baseline and new package design
Simple LCA Indicator Results

Fossil Fuel Saved Could Power 21 Average U.S. homes for an entire year!

Greenhouse Gas Emissions Reduction eq. to Planting 1899 tree seedlings!

New Design Saves Amount of Water to Fill 5 Olympic sized pools

*Savings Calculated Based on annual volume.
TRADEOFF

“Waiting” to solve for primary packaging
TAKEAWAYS

• Just start
  • Made commitments via Climate collaborative
• Don’t ship air. Look at the whole system
  • We’re modifying our foodservice secondary pack
• Find & Highlight ROI
ROI

- 25% more product / truckload
- Over 16 fewer truckloads / season

Cases per truckload

- Current: 80%
- Additional proposed: 20%
THANK YOU

Jen-ai Stokesbary
jenai@boulderorganicfoods.com
303.530.0470 x112
Switch to a plant based film for their chocolate/candy packaging
Theo Chocolate – Organic & Fair Trade Chocolate Maker in Seattle, WA

Close relationships with cocoa suppliers

Positive impact at origin from fair trade premiums

Direct relationships with consumers

Organic, owned manufacturing

Living wage prices as well as Fair Trade & quality premiums

Fair trade premiums are used for community initiatives in the DRC

Over 50,000 people toured the Theo factory in 2018

Chocolate made from scratch in Seattle, WA

Theo Purchases Support the Lives of 34,000 people in the Democratic Republic of Congo
Theo Chocolate Products Create Cocoa-Filled Joy Nationwide

• Theo Chocolate manufactures 100+ chocolate-based products, including well-known & loved 3oz Classic bars, chocolate candy and handmade confections.

• #1 selling Organic chocolate bar in both grocery & natural channels

• All products are created with mindful recipes and intentional ingredients. We maximize flavor by using high-quality ingredients
  – Organic, Kosher & Fair Trade Certified
  – Soy-free & Palm-free

• Theo invites consumers to be part of our mission through Factory Experiences and employee-led chocolate classes like Hand-Rolled Ganache Making and Chocolate & Cheese Pairing
Reducing Theo’s Environmental Impact in 2020 & Beyond

• At Theo, we take steps to reduce the negative impact on the environment, in order to care for both people and planet
  − Utility Usage Monitoring & Plan for Increased Efficiency in 2020
  − Employee Transportation Subsidies
  − Ongoing Education on Sustainable Cacao Growing Practices
  − Ongoing Exploration of Sustainable Packaging Options
Packaging Initiative

• Insight: Existing (Recyclable #5) flow-wrap packaging not being recycled, ending up in the landfill

• Action: Invigorate search for sustainable, flow-wrap options, focusing on bio-based
  - Partnered with industry experts to identify the best alternative for current packaging structure & investigate net climate impact of the potential transition
  - New Structure: Bio-based PLA film
Analyzing New vs Old – Theo Chocolate

Measuring environmental impact of baseline and new package design
Simple LCA Indicator Results

Fossil Fuel Saved Could Power 3 Average U.S. homes for an entire year!

Greenhouse Gas Emissions Reduction eq. to Planting 23 tree seedlings!

Water USED Enough for 13 people to shower every day for an entire year.

*Savings Calculated Based on annual volume.
Key Takeaways

Packaging Tradeoffs

» Packaging shifts come with trade-offs and it is important to evaluate those tradeoffs and determine what is best for your company & consumers
» Don’t expect an easy answer!

Time Investment

» Vetting new packaging structures takes significant time and resources
» Start research early, ask for help and test, test, test!
» Schedule yearly packaging reviews

Clear Success Parameters

» Discuss, debate and define what success looks like for your company
» Clear goals from the start will guide tough decisions down the line
Path to Implementation – Next Steps

More Production Testing
» Second round of testing for in-house products
» Large-scale test at co-manufacturing partner
» Packaging equipment supplier vetting

Shelf-Life Confirmation
» 4 Months into shelf-life testing (12-month shelf life product)
» Comparing current structure vs. new structure over time in various storage environments

Qualification
» ATM D6400 & Certification (6-month lead time)
Switch to a sugarcane-based bio HDPE bottle
Delicious - Healthy - Functional
The Story of an Athlete

Arpit Bhopalkar
Founder & CEO
Ayurvedic Botanicals that Taste Great

- **Ginger + Amla**
  - Recovery Support

- **Moringa + Wheatgrass**
  - Superfood Support

- **Turmeric + Ashwagandha**
  - Immunity Support
Bhoomi means “Mother Earth”

Balanced Health

Equitable Economies

Regenerative Practices
Analyzing New vs Old - Bhoomi

Measuring environmental impact of baseline and new package design
Simple LCA Indicator Results

- Water Saved Enough for 36 people to shower every day for an entire year!
- Greenhouse Gas Emissions Reduction eq. to taking Off the road for an entire year!
- Fossil Fuel reduced by 22 barrels of oil!

*Savings Calculated Based on annual volume.
Packaging Climate Optimization Project

A partnership between Climate Collaborative and Trayak
Where Are We Now?

• Tech. Design Completed > Tooling/Molding Phase

• Sample material to be showcased at Expo West
Next Steps

• Product testing

• Marketing campaign to build awareness

• Expected launch 2020
Takeaways

• Why Recyclable over Compostable

• Consider the Trade-Offs

• Due-Diligence is critical
Moving Forward

• Continuous improvement with sugarcane bagasse

• Mission to revolutionize Sugarcane via regenerative practices

Balanced Health
Equitable Economies
Regenerative Practices
Thank you! Learn more at drinkbhoomi.com
Takeaways

• Even small packaging changes when rolled up with annual volumes, can have a big impact at the company level.

• Every change in material has trade-offs
Questions?  
Thank you!  
https://ecoimpact.trayak.com

Prashant Jagtap – prashant.jagtap@trayak.com
Alison Younts – alison.younts@trayak.com
Discussion

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