



# The Role of Packaging in Reducing Waste

**Jim Mize**  
Vice President, Global New Business

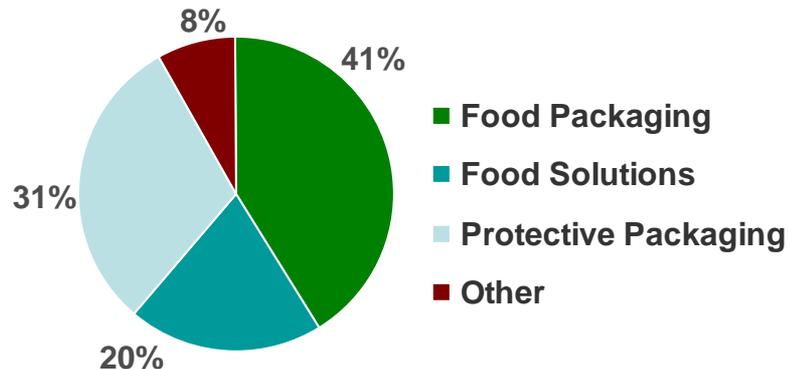
# A leading global innovator & manufacturer of specialty packaging and performance-based materials & equipment systems

- Known to create markets with leading, recognized brands:

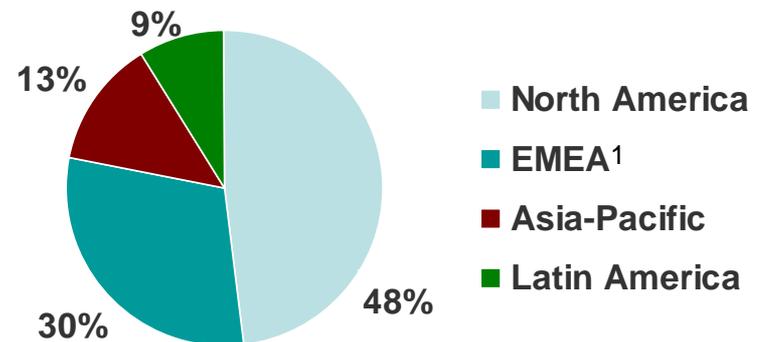


- Diverse, growing revenue streams: \$4.8B revenue in 2008
- Listed on NYSE, S&P 500, Fortune 500
- Focused on innovation: 2% of sales on R&D

## Business Unit Revenue Mix



## Geographic Revenue Mix



<sup>1</sup>EMEA= Europe, Middle East and Africa

# Our Approach To Corporate Citizenship



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CITIZENSHIP OVERVIEW

CHALLENGES FOR SUSTAINABLE GROWTH

CITIZENSHIP FRAMEWORK

It is not what we make that matters most,  
**it is what we make happen.**

This site reviews Sealed Air's efforts in the area of Corporate Citizenship, including corporate social responsibility, governance and business practices, environmental stewardship, growth in emerging markets and our commitments to employees and our stakeholders.

-  Sustainable Packaging Solutions
-  Environmental & Safety Excellence
-  Values and Compliance
-  Community Involvement & People Development
-  Globalization & Emerging Markets



For our products, sustainable attributes can be quantified in terms of weight reduction, energy savings, and carbon footprint reduction

## Global Drivers



Climate Change

Use of Natural Resources



Waste Management

## Sealed Air Goals

- **Material Efficiency**
  - Thinner, lighter products
  - Products containing renewable materials and more recycle content
  - Reduce materials that go to landfills
- **Energy Efficiency**
  - Reduce energy needed for customers to transport and store their products
  - Reduce energy needed to manufacture products
- **Carbon Efficiency**
  - Reduce greenhouse gases associated with packaging and its contents
  - Reduce food and product loss
  - Use LCA tools in the development of products

## ... But measuring the sustainable value of our products goes beyond environmental criteria

Performance	Society	Environment
<p>Meets the market demands for value</p> <p>Reduces the quantity of damaged or wasted products during transport, storage or use</p> <p>Helps customer's operate more efficiently and enhances their products</p> <p>Optimizes the efficiency of the supply chain.</p>	<p>Provides measurable benefits to individuals &amp; communities</p> <p>Helping emerging markets grow economically</p> <p>Is safe and meets all regulatory requirements</p>	<p>Material Efficiency – makes efficient use of raw materials and minimizes waste</p> <p>Energy Efficiency – reduce the amount of energy needed to manufacture and ship our products as well as the amount of fuel our customer's need to ship and store their products</p> <p>Carbon Efficiency – reduce greenhouse gas emissions associated with the overall package and contents of the package</p>

## We are working to enhance the understanding of “sustainable packaging” by focusing on three priorities...

### For the environment, we focus on:

- Begin at the point of design, where we can prevent waste, optimize our use of resources, select safer materials and plan for the recyclability or recoverability of our packaging.
- Utilize Life Cycle Management tools in the development of new products and as part of a review for existing products to balance market and environmental impact.
- Keep customers and the public informed on all the environmental attributes of a product and the importance of meeting demands for price and performance.

**... but recognize wherever we sacrifice performance we place even more pressures on our natural resources and global climate.**

**Sustainability is a business strategy within Sealed Air that leverages innovation to transform the way we do business**



# What is Sealed Air doing about sustainability?

## Committed Focus & Infrastructure

- ☑ **Business Objectives**
- ☑ **Sustainability Framework**
- ☑ **Organizational Alignment**

## Internal Operations



## Products & Services



## Value Chain Impact

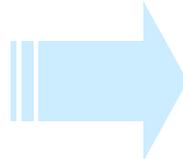
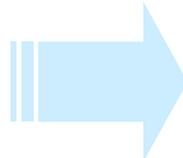
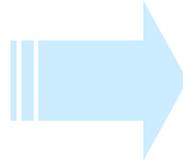


# Driving sustainability in our operations...



## Sealed Air 2010 Internal Goals:

- **Material Efficiency**
  - Increase saleable product ratio to 98%
- **Energy Efficiency**
  - Reduce energy intensity by 2%
- **Carbon Efficiency**
  - Reduce greenhouse gas intensity by 12%

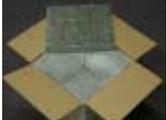


## Examples of Implementation:

- Improved total process yields
- Reprocessed scrap into useful materials
- Completed energy audits and facility upgrades
- Recovered energy from waste plastics
- Identified and reduced sources of direct emissions
- Increased productivity of our processes

# And in our product design



		Material Efficiency		Energy Efficiency		Carbon Efficiency			
		Source Reduction	Alternate Material	During Use	In Transit & Storage	Lower Life Cycle Impact	Less Product Waste		
	<b>25%</b> thinner	New Cryovac® D-940 shrink film is thinner than similar products and performs at lower temperatures		●		●	●	●	
	<b>BPI</b> certified	Renew-a-Pak™ high-performance, dual ovenable bakeware is certified compostable by BPI <sup>1</sup>			●	●		●	
	<b>20%</b> increase	Cryovac® Mirabella case ready package design is slimmer, increasing product space utilization by 20%					●	●	●
	<b>10x</b> R-value	NanoPore insulation panels offer 10-times the performance vs. traditional materials		●		●	●	●	●
	<b>90%</b> lighter	Cryovac® Flavour Mark™ retort pouch packaging is 90% lighter than the metal can alternative		●		●	●	●	●
	<b>40%</b> less	Compression Pack for Dri-Loc® pads saves 40% space and reduces packaging waste vs. corrugate		●			●	●	

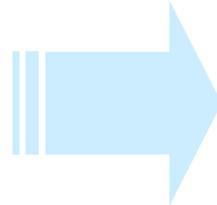
<sup>1</sup>=Biodegradable Products Institute

# We are “closing the loop” with a focus on the full value chain impact

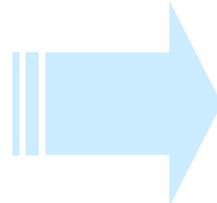


## Sealed Air Focus:

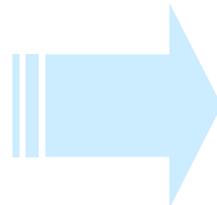
**Eliminate downstream product waste**



**Enable recovery of packaging at end of life**



**Improve labor and energy efficiency**



## Examples of Implementation:

Innovative systems to eliminate product waste from distribution, at retail and at home

Networks to recover used packaging and reprocess into usable products or to recover energy

Equipment esigned to maximize performance while minimizing space, energy and labor



A closer look at sustainable packaging  
and reducing waste

# Food waste has a significant impact across the food supply chain in both developed and developing regions

**Millions  
of Tons**

rot in landfills  
emitting methane gas



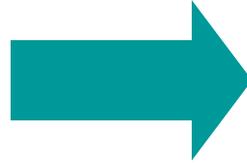
- Consumers throw out 25.9 million tons of food each year in the U.S., or approximately 25% of what they purchase
- Supermarkets, restaurants and convenience stores throw out 27 million tons, representing \$40 billion of wasted food
- It costs the U.S. around \$1 billion every year just to dispose of all its food waste



**40%**  
of food  
produced globally  
is never eaten

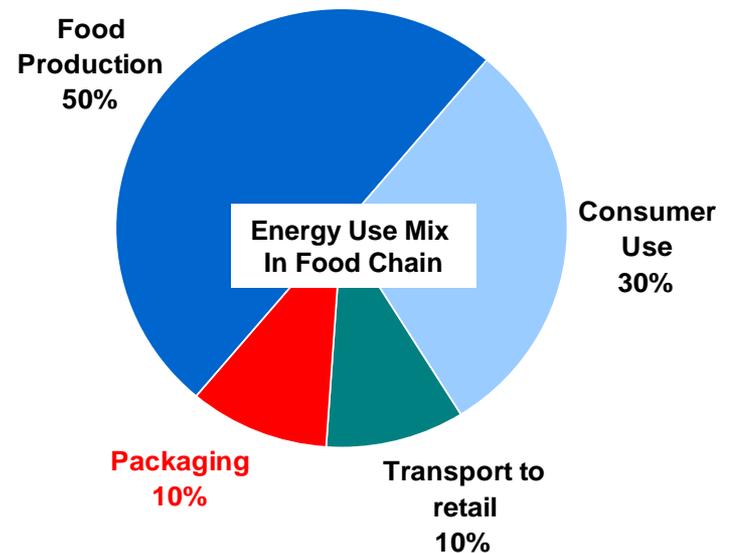
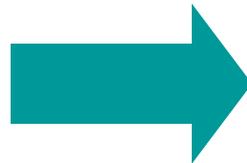
# ...And contrary to belief, packaging is less of an environmental challenge than wasted food itself

- Biodegradable food waste in landfills isn't "innocuous"



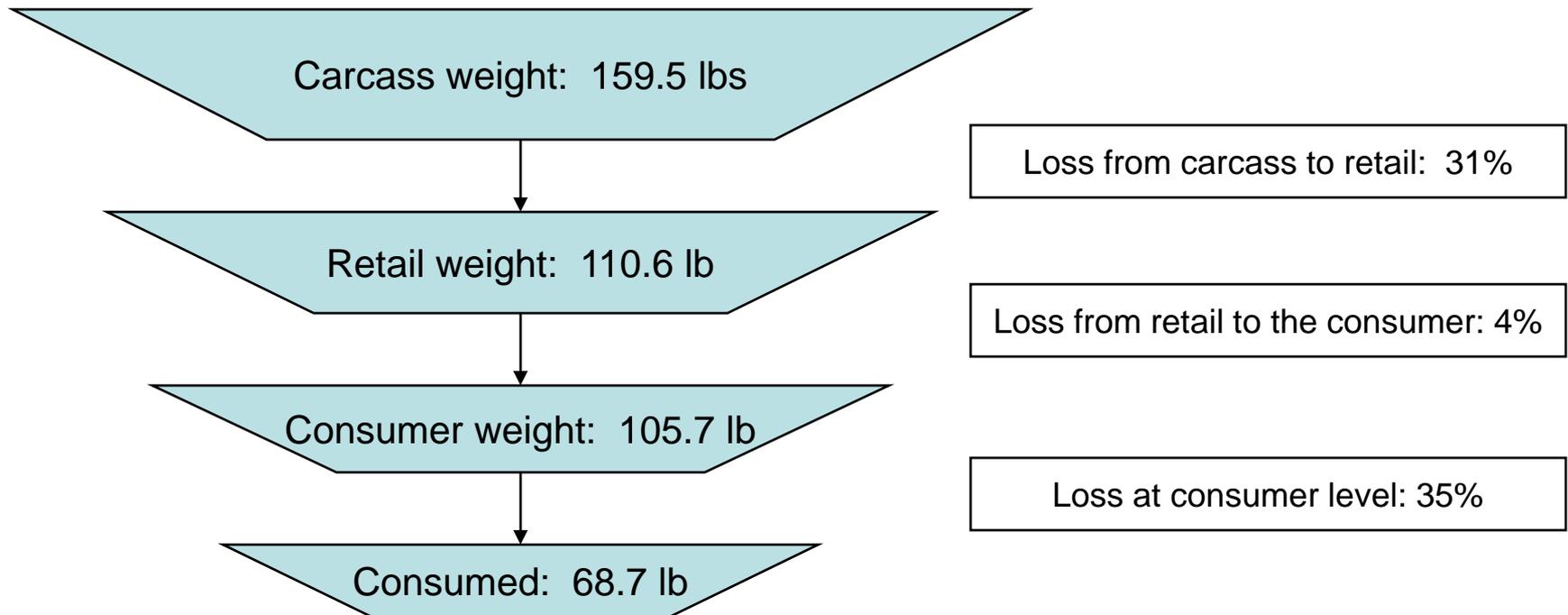
- Food waste has 10x the environmental impact of packaging waste
- Rotting food releases methane gases, which are 20x more damaging to the environment than CO<sup>2</sup>
- And landfills represent 34% of all methane emissions in USA

- Packaging represents 10% of all the energy used in the entire food chain



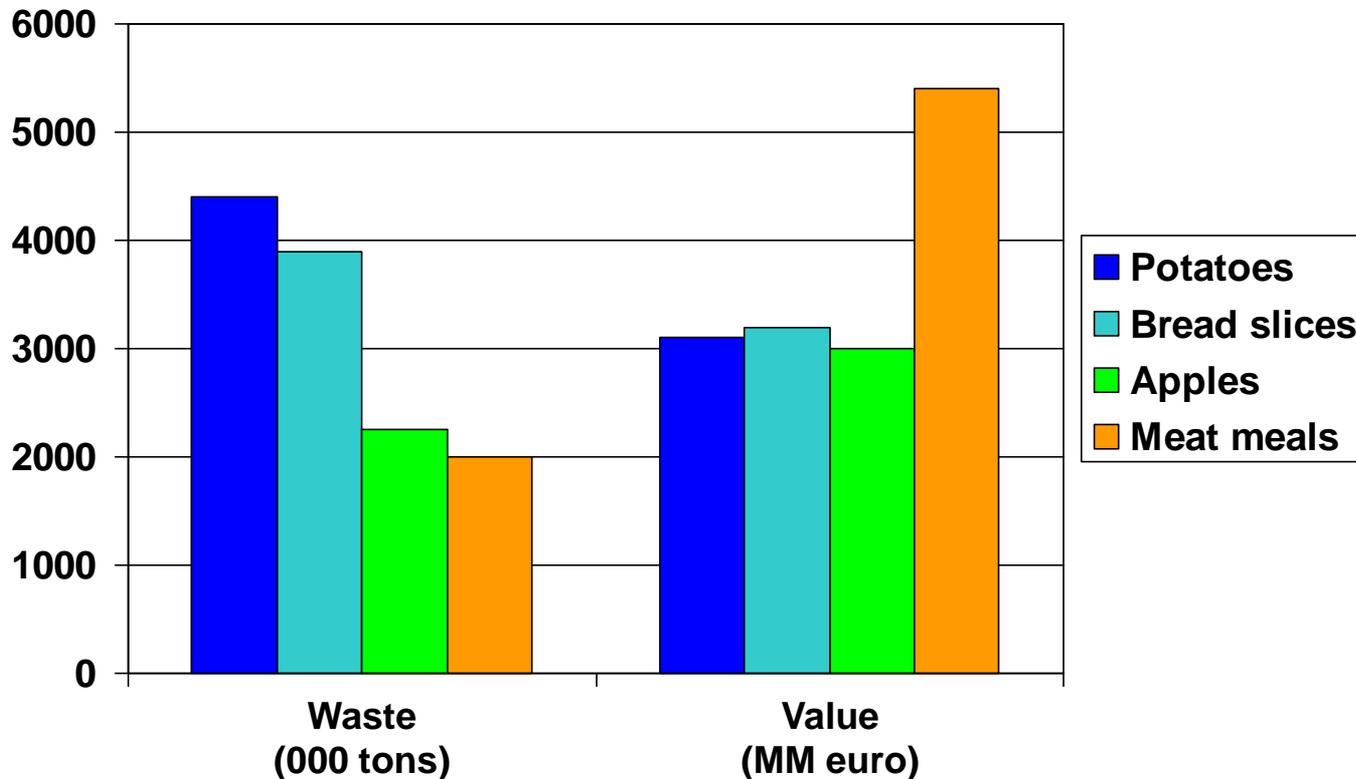
# U.S. food losses are estimated annually from data for various food categories

USDA Statistics for total red meat, per capita, in 2007



**USDA estimates 57% loss across all levels**

## Rankings of perishable food losses at consumer level vary depending on whether they measure weight or economic value



According to European consumer studies, almost two thirds of consumer food waste is avoidable

# Packaging plays a vital role in reducing food waste across the supply chain

Food that is wasted before it is consumed requires ten times more energy and materials to produce than the packaging used to protect it.

Processor



Retailer



Consumer

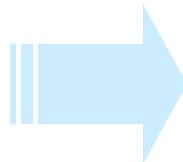
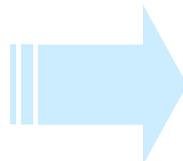
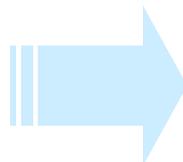


# Packaging solutions for reducing food waste at processors



## Reasons for Waste

- **Damage during transport**
- **Product spoilage**
- **Loss of production yield**



## Packaging Solutions

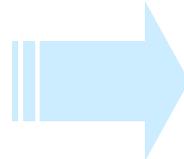
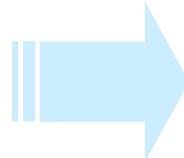
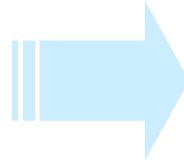
- **Leak proof packaging**
- **Tough, tear-resistant packaging**
- **Hermetic seals**
- **Vacuum or modified atmosphere packaging**
- **Efficient equipment systems**
- **System integration and automation**

# Packaging solutions for reducing food waste at retail



## Reasons for Waste

- In-store preparation losses
- Product spoilage
- Passed sell date



## Packaging Solutions

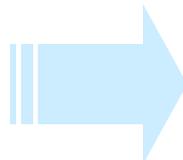
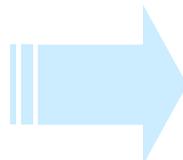
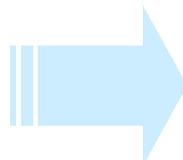
- Centralized food preparation
- In the bag merchandising
- Leak proof packaging
- Vacuum or modified atmosphere packaging
- Shelf life extension
- Freshness preservation

# Packaging solutions for reducing food waste at consumer level



## Reasons for Waste

- Cooked or prepared too much
- Product spoilage
- Not eaten in time



## Packaging Solutions

- Portion control packs
- Ready to heat entrees
- Resealable packaging
- Vacuum or modified atmosphere packaging
- Shelf life extension
- Freshness preservation

## Reduction in food waste through centralized preparation

- Case ready centralizes food preparation, extends shelf life and creates supply chain efficiencies, thereby reducing downstream food waste at retail.
- Case ready packaging is estimated to reduce both yield loss and throw-away shrink at retail by approximately 50%.
- Total yield savings are approximately 5% of total product sales. This reduction in waste of fresh red meat in the U.S. results in a carbon footprint savings of 780,000 tons/year.



**Case ready food waste savings in the U.S. alone are roughly equivalent to annual emissions from 143,000 cars**

## New Cryovac® case ready packaging formats can drive improved business cases

- One major retailer in Europe adopted Cryovac® Mirabella case ready format for all fresh beef in early 2008
- By the end of the year, sales at the store increased 15%
- **As a result, meat processor plans to double volume of case-ready within five years**



**50%**

Product loss  
reduction

**20%**

Increase in  
product display

**15%**

Increase in case  
ready sales

**Our solutions save our customers money and help them operate more efficiently. This is truly a case where good sustainable practices are good for business**

# Cryovac® barrier bags continue to be the industry standard for packaging performance and efficiency

- Designed to deliver the ultimate in protection while extending life and maintaining product integrity for distribution and retail display.
- In the Bag merchandising reduces need for repackaging and improves store in-stocks
- New consumer product features for easy opening and portion control.



**>100%**

Increase in  
case shelf life  
vs instore pack

**80%**

Decrease in  
weight for roast  
package

**38%**

Increase in case  
in-stocks for  
pork rib pack

**For decades, Cryovac has offered efficient bag systems including both high performance barrier bags and chlorine-free bags to meet customer and retailer fresh meat packaging needs**

## Conclusions—Improving Sustainability through Packaging Solutions

- To improve sustainability, packaging solutions must be environmentally responsible, socially beneficial and provide economic value.
- Environmental impacts associated with packaging need to include the product in the analysis as well as the potential to prevent or reduce food waste through packaging solutions.
- Significant progress can be achieved by looking across the value chain and partnering to improve overall sustainability.

# QUESTIONS