



**Together in customer  
partnerships**



# Together in customer partnerships

We equip our customers to achieve their sustainable transport packaging goals, moving forward with them and delivering measurable impact every step of the way. More than a provider of reusable packaging and pooling solutions, we're a trusted partner committed to working alongside our customers to implement changes that deliver both cost savings and sustainability-focused improvements. Through innovation, circular design and end-to-end supply chain optimization, we deliver an integrated value proposition that reduces waste, halves food loss, minimizes emissions and water use, protects consumers and workers and reduces labor and costs, creating lasting value for all.

From optimizing food transport and reducing shrink through smart packaging design, to eliminating single-use materials and lowering extended producer responsibility fees, we deliver solutions that reduce environmental impact — all quantified through LCAs that turn collaboration into continuous improvement.

IN 2024, WE HELPED OUR CUSTOMERS REDUCE  
THEIR PACKAGING RELATED ENVIRONMENTAL IMPACTS

**339K+** tons

(OF CO<sub>2</sub>e REDUCED, EQUIVALENT TO  
REMOVING 707M MILES DRIVEN)

**4.5M**

TREES SAVED

**57M+ m<sup>3</sup>**

WATER SAVED (≈ 22,800 OLYMPIC POOLS)

**268K+ tons**

OF CARDBOARD AVOIDED

**50%**

REDUCTION IN HANDLING TIME

**50%**

FOOD DAMAGE AVOIDED

**100+ LCAs completed**

FOR CUSTOMERS IN 2024 TO GUIDE DECISION-MAKING

# Advancing customer goals through our sustainability value proposition

Tosca contributes to our customer's sustainability goals all along the value chain. Our LCA process quantifies the benefits, delivering data to select the right packaging solution for each customer's unique supply chain objectives.

100+

Number of LCAs we completed for customers to support their decision-making in 2024.



## Tosca's value chain efficiencies result in:

### Elimination of single-use packaging:

- Little to no costs related to packaging waste regulations, such as EPR fees in the U.S., U.K. and EU
- Zero cost for disposal of non-recyclable packaging
- Support for PPWR compliance in the EU

### Reduction in emissions and lower environmental footprint:

- Emissions reduced by over 60% on average
- Simplified compliance with emissions reporting requirements, saving time and associated costs
- Reduced disposal costs and carbon credit purchase requirements

### Minimization of food damage, loss and shrink:

- Average 3.3%+ reduction in lost income from food damage
- Lower replacement costs due to less spoiled or damaged food
- Increased profit margin at constant prices
- Less food sent to landfill, reducing associated emissions by up to 50% on average

# Cost-effective packaging solutions

In the face of escalating challenges and mounting financial pressures within the food sector, efficiency and cost savings have never been more critical. Meanwhile, businesses also face pressure to reduce their environmental footprint and achieve reduction targets.

Given these challenges, cost-effective, sustainable packaging has become a priority, offering a way to protect the bottom line and the environmental reputation of suppliers, processors and retailers and other stakeholders.



“

At Tosca, we understand the pressures facing retailers and suppliers today. Rising production costs, fluctuating fuel prices and customer and investor sustainability concerns, along with evolving regulations, demand immediate action. That's why Tosca's solutions are strategically designed to cut waste, save money, achieve stated ESG goals and ensure compliance, delivering tangible efficiencies that impact your bottom line and our shared environment.”

**Laurent le Mercier**

*EMEA President*



To determine if a packaging solution is truly cost-effective and sustainable, it must be evaluated across the entire value chain — not just by its price or materials. This includes protection of contents (quality and shelf life), space efficiency, weight, recycled content and its ability to be reused or recycled.

# Reusable packaging defined

The newly adopted PPWR in the EU and rapidly evolving EPR laws are radically transforming the type of transportation packaging systems a company requires. This move to more sustainable and cost-effective solutions, focused on a pooled approach and reuse over recycling, is our business in a nutshell!



60+

LOCATIONS



100%

CIRCULAR PRODUCTS



60+

YEARS OF EXPERIENCE



100%

U.S. SITES ISO 22000 CERTIFIED

## Durable and smart

At Tosca, our reusable, recyclable plastic pooled packaging solutions comply with the EU PPWR and minimize — if not remove — the costs associated with the EPR laws both in the U.S. and Europe. In addition, we engineer food-grade packaging products for strength, durability and optimal ventilation to reduce food waste and preserve product freshness across the supply chain. By eliminating single-use packaging with our reusable solutions, Tosca helps customers achieve their ambitious sustainability goals while reducing costs and complying with those increasingly stringent packaging regulations.

See our [Cultiva Farms Video](#)

“

Tosca aims to lead not just in product innovation, but in setting the standard for scalable, sustainable logistics solutions with outstanding customer service.”



**Richard Evans**  
*Director of Sales  
Downstream, U.K.*

# Transforming the transportation packaging sector



## Helping our customer do what they do best: sell their goods

Transportation packaging is the unseen and unsung hero of the supply chain. Procuring, storing, repairing, packing and moving packaging efficiently while navigating regulatory requirements and achieving sustainability expectations is not easy for several reasons:



**Cost:** The hidden cost associated with excess labor and time required to handle single-use packaging, product loss due to damage and cost to replace, along with regulatory compliance and EPR fees (and potential fines), all strain resources.



**Environmental:** Manufacturing, storing, washing and transporting single-use packaging increases emissions, water use and waste along the supply chain.



**Safety:** Corrugated boxes and wooden pallets expose workers to ergonomic strain. For example, cuts and splinters can pose risks in food production areas (splinters) or during transit (puncturing contents).

Tosca's pooling solutions address all of these issues.



# Using less, saving more: Sustainable circular packaging



Tosca takes a comprehensive data-driven approach to quantifying the value proposition for reusable packaging and pooling solutions. Covering everything from costs to labor to sustainability, we give our customers the collective result of adopting our circular packaging solution.



Our reusable packaging benefits include:

- **Regulatory compliance:** Tosca products support customer's circular economy principles and compliance with packaging regulations like the PPWR and EPR laws, while enabling cost reduction due to our **packaging being reusable over 100 times before being 100% recycled**.
- **Sustainability targets:** Emissions and water use associated with asset manufacture, use and movement are shared among all **users, reducing individual footprints and supporting Scope 3 (supply chain) reductions**.
- **Product quality:** Our carefully designed RPCs allow **effective ventilation, which reduces product shrink by over 50%**, while their rigid form **prevents products from being crushed and damaged**, particularly vulnerable items like eggs, protein products and fresh produce.
- **Logistics optimization:** Customers can fit more product per truck through improved cube efficiency due to the consistent sizing of containers. Maintaining product quality reduces the need for replacements to be shipped. **These two enhancements result in fewer transportation needs and thus lower emissions.**

## A plethora of circular packaging benefits

- **Operational efficiency:** Standardized, durable and reusable plastic packaging creates consistency that enables **automation, reduces handling time by over 50%, streamlines logistics and minimizes downtime from damaged packaging.**
- **Supporting traceability:** Tracking and tracing technologies **support logistics planning and movements** and provide speedier compliance with regulatory response requirements during product recall events.
- **Stock management:** Traceability also supports improved stock management, replacing the first-in-first-out approach with one that **considers exposure of the products to temperature, humidity and shock during transport.**
- **Consumer (and worker) protection:** Tosca plastic packaging is **made from food-safe materials**, so there's no unwitting exposure to non-food grade plastic, nails, splinters or PFAS, which has associations with paper products.

When three leading U.S. retailers switched to Tosca's RPCs, the results spoke volumes — proving that Tosca delivers scalable, measurable impact.

62%

SHRINK REDUCED

61%

FEWER GHGS

59%

LESS WATER



\$70m

ANNUAL SHRINK SAVINGS (EGGS)

90

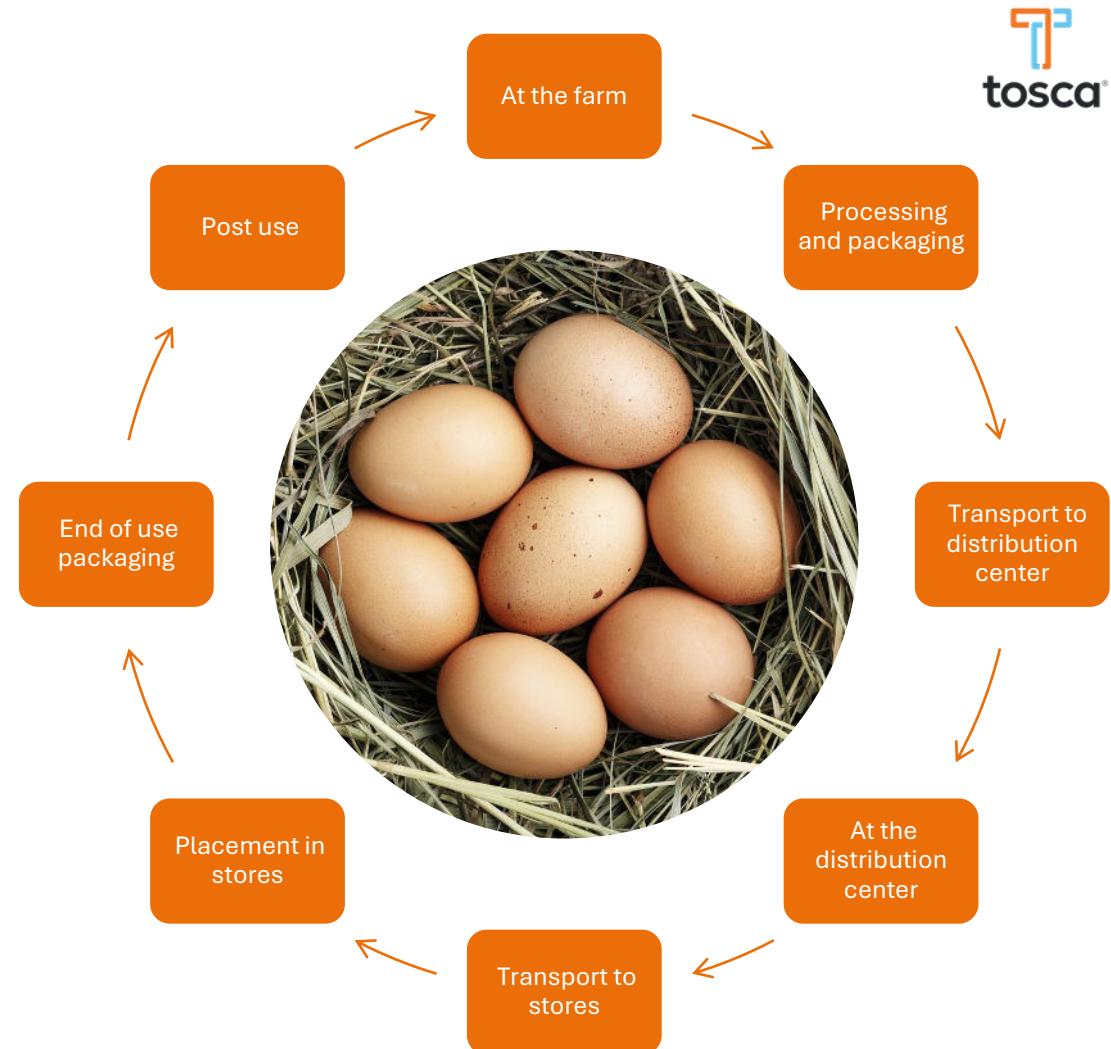
TRUCKS ELIMINATED/ YEAR

# Take the journey of an egg

Amid fluctuating global egg prices, the protective role of packaging is even more critical. The optimal solution not only safeguards this increasingly valuable product from damage but also enhances handling efficiency and minimizes environmental impact along the supply chain.

**Tosca's RPCs provide benefits that ripple through the supply chain.**

Tosca's reusable packaging solutions do more than safely move eggs—they protect profits, reduce environmental impacts and simplify operations at every point along the journey from farm to store—resulting in cost savings **of around 24%** and emissions savings of up to **80%**, compared to traditional packaging.



By following the journey of ten million eggs from chicken to table, we see how Tosca's packaging solutions support every stage of the journey.

# Reducing shrink, increasing value: The case for reusable packaging



Eggs are fragile and can experience up to 10% loss across the supply chain. Reducing this damage through a rigid reusable packaging solution means more food reaches the shelf, cutting production losses, fines for unmet supply and replacement and transport costs and associated emissions. The benefits of Tosca's RPCs in reducing shrink are highlighted throughout each stage of the journey of the egg on the following slides.

## Estimated cost and emissions associated with lost eggs

(includes losses during transport and at distribution center as well as retail store)

### RPCs

**10,000,000 eggs**

**Loss rate = 2.3%**

**-230,000 eggs**

**Cost of unusable eggs**

**\$47,917**

**Emissions from production of lost eggs**

**42 MT CO<sub>2</sub>e**

### Cardboard Boxes

**10,000,000 eggs**

**Loss rate = 4.8%**

**-480,000 eggs**

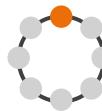
**Cost of unusable eggs**

**\$100,000**

**Emissions from production of lost eggs**

**88 MT CO<sub>2</sub>e**





## At the farm

### Egg production

The U.S. and EU each produce around 95 billion eggs annually. Egg farming at this scale is a resource-intensive operation, with high input costs spanning feed, utilities, labor and regulatory compliance.

### Estimated cost at the farm

TOTAL COST OF PRODUCTION FOR TEN MILLION EGGS

**\$750,000**

### Estimated emissions at the farm

TOTAL EMISSIONS FROM PRODUCING TEN MILLION EGGS

**1,833 MTCO<sub>2</sub>e**

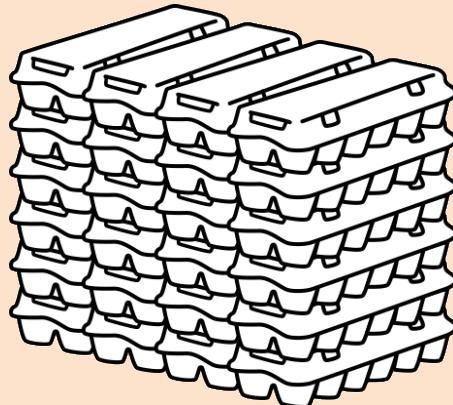
## Transport packaging production and delivery

Tosca's reusable plastic egg RPCs can hold more eggs than industry standard corrugated boxes and, along with reusable plastic pallets, can be used over 100 times before being recycled back into new products. Because of this, customers using our egg RPCs and plastic pallets have an opportunity to lower their emissions and lower costs associated with moving eggs through the supply chain.



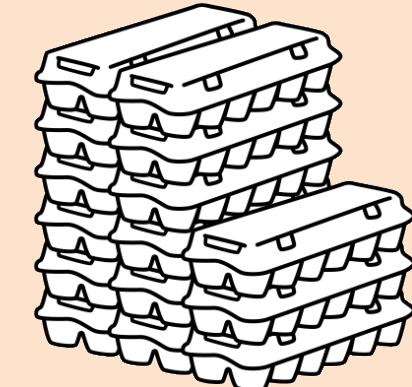
**Tosca's egg RPCs can hold 24 dozen eggs vs. 15 dozen in an industry standard corrugated box. Plastic pallets are also safer (no nails or splinters) in a food environment.**

Tosca



**VS.**

Traditional





# Processing and packaging

## Processing, quality control and packaging

Once eggs are harvested, they are washed (U.S. only), quality-checked and packed into Tosca's RPCs either on-site or at a separate facility.

One of the most crucial factors for maintaining egg quality is how quickly they cool. With Tosca Egg RPCs, eggs reach optimal temperature in just over a day versus five to six days in traditional corrugated boxes. This faster cooling process helps preserve freshness and gets products to store shelves quicker.

The rigid structure of the Tosca Egg RPCs also offers the ability for double stacking of full pallets, freeing up valuable cooler space, which would in turn contribute to a more efficient and cost-effective cold chain.



### Estimated cost savings in processing and packaging

#### Tosca packaging vs. single use

14% cost reduction for packaging procurement

50% potential reduction in refrigeration space required

### Estimated emissions savings in processing and packaging

#### Tosca packaging vs. single use

93% emissions reduction from packaging manufacturing

50% possible emissions reduction from required refrigeration



## Transport to distribution center

After collection, eggs are typically transported to a distribution center (DC) before heading to retail stores. During transit, they're exposed to shock, humidity and temperature changes — all of which can impact quality and shelf life.

Tosca's Egg RPCs are designed to handle the demands of refrigerated transport. Their rigid, durable structure reduces egg damage, while their consistent size and compatibility with reusable plastic pallets ensure optimal truckload efficiency.

While reusable crates are heavier than single-use options, which may lead to marginally higher emissions from transportation, they offer a net reduction of the total environmental footprint. With shrink reduced by well over 51%, use of RPCs avoids replacing 35,000 lost eggs out of every ten million — and the packaging and transport that come with them. The result? A 50+% cost saving from shrink and a net reduction in total emissions from transportation and food waste.

### Estimated cost

#### Tosca packaging vs single use

**Up to 5% increase** in transportation cost to the DC for the first trip

**51+%** reduction in cost from avoided shrink





## At the distribution center

Tosca's reusable packaging solutions streamline operations at the distribution center in more ways than one.

- **Automated packaging compatibility:** RPCs and pallets are uniform in size and designed for automation, improving throughput and reducing labor demands compared to cardboard boxes and wooden pallets.
- **Lower pallet disposal costs:** Plastic pallets have a longer service life than wooden pallets and can be repaired and reused through Tosca, avoiding and reducing EPR fees associated with broken wooden pallets.
- **Reduced cooler space, costs and emissions:** The ability to double stack the full Egg RPC pallets provides the potential to free up valuable cooler space and reduce emissions on a per occupied square foot/square meter basis.
- **Future-proofing against regulatory changes:** With new U.S. regulations requiring low global warming potential (GWP) refrigerants starting January 2025, refrigeration equipment costs are expected to rise by 7-10%, increasing the value of space-saving solutions like RPCs.

### Emissions

By using 50 % less cooler space, Tosca Egg RPCs on plastic pallets could significantly cut emissions compared with corrugated boxes on single-use wooden pallets.





## Transport to stores

Repalletized eggs are transported from the DC to the retail store, mostly in mixed loads. During transportation, eggs are once again vulnerable to shock (vibration), humidity and temperature fluctuations along with damage due to being stacked with other heavy products in the truck. All of these can compromise product quality, shorten shelf life and increase the risk of breakage.



## Placement in stores

- Tosca egg crates can be placed directly on store shelves, reducing handling time and **cutting associated costs by more than 37%**. In contrast, transferring eggs to shelf from corrugated boxes can take up to twice as long.
- Hours used for stocking or handling slip sheets and corner boards plus collapsing corrugated boxes can be reallocated to other tasks, further reducing overall labor costs.
- Opening corrugated boxes using box cutters can result in injuries that can cost anywhere from **\$540 - \$26,000** per injury.



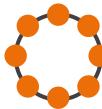
### Average time required to stock 8-foot display case



Tosca  
**10 mins**  
To stock RPCs



Corrugated boxes  
**21 mins**  
To stock corrugated boxes



## End of use packaging: Post use

Once eggs reach the store and transportation packaging is no longer needed, the end-of-use processes differ depending on the packaging system.

**Tosca's reusable RPCs and plastic pallets operate within a closed-loop reuse system.** After use, they are collected via reverse logistics (often on return hauls to the DC), thoroughly cleaned, expertly repaired if needed and seamlessly redistributed into the supply chain.

### Wasted time adds up

- Folding and stacking empty egg crates takes about **5 minutes a day** — adding up to **4 full workdays a year**.
- Breaking down boxes and baling waste takes even longer: **30 minutes a day**, or nearly **23 days per year**.

Switching to reusables eliminates this hidden labor drain.

### Tosca assets: Reused

	RPCs	Plastic pallets	Corrugated cardboard boxes	Single-use wooden pallets
Total number of assets used	275,593	7,770	5,291,395	91,277
Sent for recycling	After 100 turns	After 80 turns	Immediately	Immediately
Sent for disposal	0	0	5%-30%	5%
End of life (recycling) GHG emissions (Metric Tons CO2e)	0 (Total over life 1,795)		2,365 (Total over life 7,298)	
Water use (m <sup>3</sup> )	0 (Total over life 32,494)		23,462 (Total over life 1,687,301)	
EPR fees	EU and U.S. – Exempt	EU and U.S. – Exempt	EU and U.S. - Local fee x 100	EU and U.S. - Local fee x 80

# Cumulative impact of reusable packaging: From farm to table

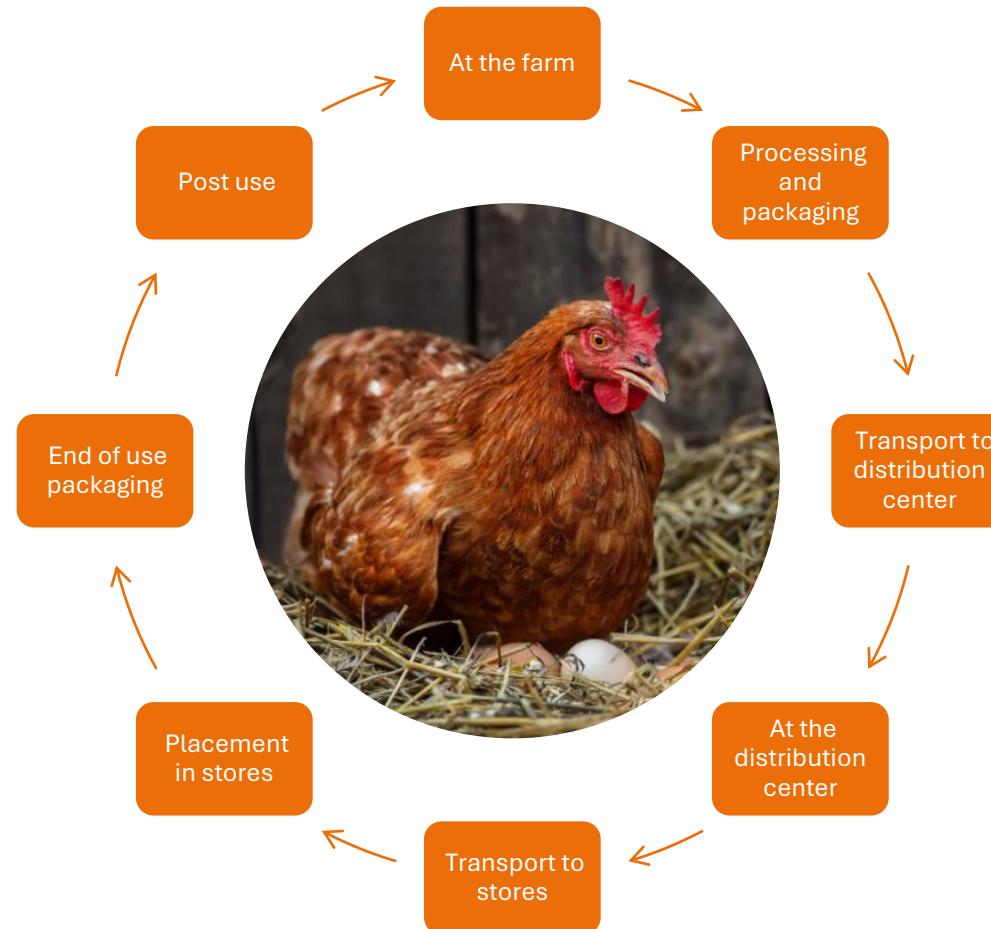
We've modeled the journey of ten million eggs to compare Tosca's reusable RPCs and plastic pallets against single-use corrugated boxes and wooden pallets. The numbers below reflect cumulative shrink and system-wide impacts.

## 1. Producer to DC

Tosca's RPCs begin delivering value early — the reuse option offers a tenfold reduction of the emissions from lifecycle components "material" and "manufacturing" compared to single-use cardboard.

## 4. Producer to end of packaging use

By the time packaging completes its full lifecycle, the total cumulative impact is clear: 24% cost savings and up to 80% reduction in emissions — driven by reduced damage, improved efficiency and reuse at every step.



## 2. At DC

Adding in handling and storage at the DC, the total impacts result in 14% cost savings (this includes base EPR fees as of June 2025 in Oregon for paper and wood) and a 64% emissions reduction compared to single-use solutions.

## 3. Transport to retail store

As eggs move through the full supply chain to retail, the transport packaging advantage of the RPCs combines with a reduction in product loss to offer an even larger reduction in cost and emissions.

# Real results through collaboration

Our greatest impact happens when we partner with others. These case studies show how working side by side with our customers leads to tangible results — lowering emissions, reducing food waste and delivering significant cost savings through reusable, data-driven solutions. Together, we're proving that sustainability and efficiency go hand in hand.

## CASE STUDY

### Versova

To eliminate packaging-related contamination risks, Versova transitioned to Tosca's RPCs — a sanitized, traceable and structurally stronger alternative to corrugated boxes. The main driver for switching to Tosca RPCs was the reduction in broken eggs during transportation. The RPCs allow additional protection for the egg cartons that resulted in an average 66% reduction in egg loss.

[Read the full case study.](#)

7X

MORE EMPTY FOLDABLE CRATES CAN BE TRANSPORTED IN A SINGLE VEHICLE COMPARED TO TRADITIONAL RIGID PLASTIC CRATES.



“

Our strong focus on designing our assets to afford better protection of transported goods has resulted in reduced damage/shrink rates for product moved. We have seen significant reduction in produce damage shrink, over 51% of eggs moved and over 20% of total meat and poultry moved, **saving our customers millions of dollars** in lost sales while **reducing emissions** from the disposal and replacement of damaged food by **85%**.”



**Holly Maher**

*VP Commercial Sales NAM*

## CASE STUDY

## Brookshire Brothers Grocer

Brookshire Brothers, a vertically integrated grocer out of Texas, improved efficiency, quality and sustainability by switching its CRM program from cardboard boxes to Tosca's reusable RPCs. The team quickly saw reduced breakdowns, waste and labor needs, along with faster production and easier handling. The change delivered cost savings, happier employees and better product protection, all while supporting sustainability goals.



### How Brookshire Brothers uses Tosca products

The key benefits of Tosca's reusable plastic crates (RPCs) as recognized by Brookshire Brothers:



#### Product Protection



#### Labor Savings



#### Conveyer- Ready



#### Zero Corrugated to Landfills

“

We're able to move at a much faster pace. RPCs are more efficient, resulting in labor savings, and we don't have any damage issues. Not only that, we are able to help the planet, too.”



#### Randy Deal

*Director of Perishables,  
Brookshire Brothers*

## CASE STUDY

## Transforming the transportation packaging sector

Tosca helped a pan-European customer, with a portfolio of more than 25 well-known brands, transition from over 150 different types of transportation packaging used by a wide range of suppliers, to a series of standardized reusable alternatives.

The variety of packaging posed significant problems for the company, ranging from:

- Handling small batches of many different sized packaging
- Significant storage space requirement for both new packaging and filled products
- The need to handle multiple waste streams

In partnership with other transport packaging providers and transport companies, and by implementing a pooled system, Tosca reduced packaging-volume requirements and empty packaging-storage space needs and streamlined truck movements.

The result was a reduction in the number of trucks and their movements with an overall increase in operational efficiency and significantly reduced greenhouse gas emissions.



## CASE STUDY

## Agromark

Agromark partnered with Tosca to improve broccoli transport from Spain to the U.K. using custom foldable bins. This **reduced return trips by 75%**, lowered CO<sub>2</sub> emissions and preserved product quality — an imperative for fresh produce — while increasing efficiency. The reusable bins optimized storage, **cut costs and supported Agromark's sustainability and logistics goals.**

[Read the full case study.](#)



7X

MORE EMPTY FOLDABLE CRATES CAN BE TRANSPORTED IN A SINGLE VEHICLE COMPARED TO TRADITIONAL RIGID PLASTIC CRATES.



Learn more at  
<http://www.toscaltd.com/>  
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