



GUIDE:

Rediscovering Efficiency in the Meat Industry

Adopting Systems that Set Your Meat
Supply Chain Up for Short-Term Wins
& Long-Term Success

Supply Chain Challenges Facing the Meat Industry

The meat industry across North America has experienced a number of supply chain disruptions and challenges over the past few years. While Covid-19 definitely had a part to play in this, numerous other issues have been challenges for some time, such as lack of technology and efficiency, inflation, and labor shortages (some estimates put the **shortage of truck drivers at 100,000 drivers** alone).

Within the meat packaging industry there is a lack of traceability, and with that comes high labor costs. According to the Wall Street Journal, the price of **beef has risen 20% from 2020 to 2023** and is projected to increase further. When customers' have to pay higher prices, they expect the quality to match. Inflation and lack of product protection can leave consumers unsatisfied. New policy changes happen frequently, and keeping up with regulations and sustainability requirements can also prove difficult. A large challenge for many meat packaging companies are the numerous cold chain regulations hitting the market. The Food and Drug Administration (FDA) frequently updates laws, resulting in **frequent product recalls** and potential losses of millions of dollars in lost product and company reputation damage.

It can seem nearly impossible to balance cost, efficiency, effectiveness, and sustainability. And often, it seems that options that tend to save the most money often have a larger negative environmental impact.

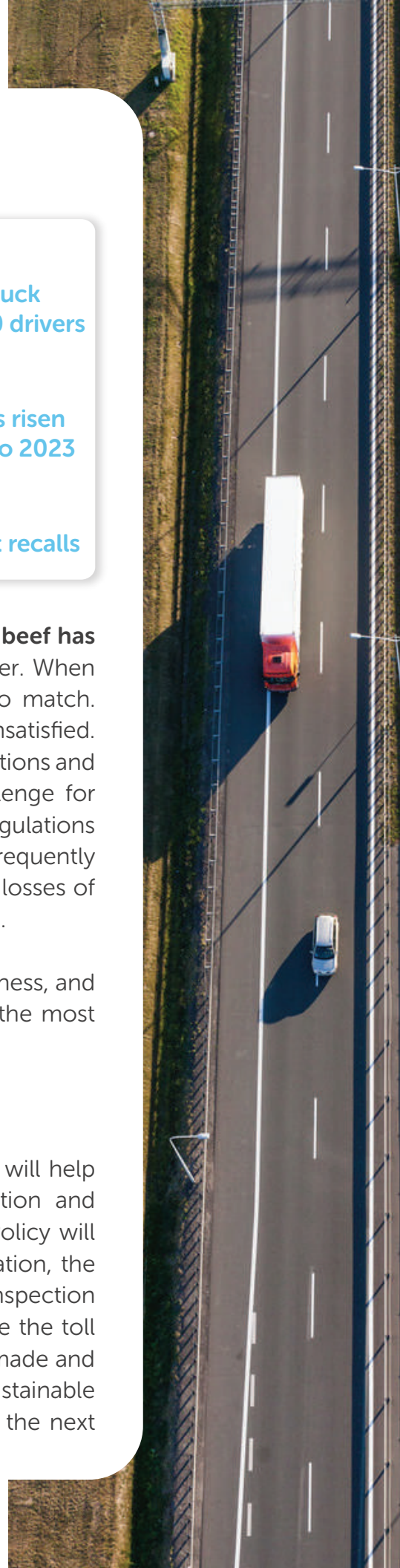
Solutions

Integrating more technology such as traceability and automation will help your company run more efficiently and avoid miscommunication and damage along your product's journey from farmers to grocers. Policy will play a big role in managing inflation. The Biden-Harris Administration, the Environmental Protection Agency (EPA), and the Food Safety and Inspection Service (FSIS) are currently developing more ways to help alleviate the toll inflation has taken on the meat industry. Until those changes are made and inflation decreases, investing in your product and making it more sustainable through better packaging and meeting customer expectations is the next **best thing you can do for your company**.

1.
Shortage of truck drivers at 100,000 drivers

2.
Price of beef has risen 20% from 2020 to 2023

3.
Frequent product recalls



Integrating Game-Changing Technologies

There are new methods created every day to improve the efficiency and efficacy of your supply chain through technology. Here are just a few ways to get started:



► Automation

Automation is the ability for tasks to be completed without the use of manual labor. In meat industry terms, it is ensuring the safety and integrity of the goods throughout transport. Through automation, errors in processing labels (numbers, names, and addresses) can be **reduced by 50%** or more.

► Traceability

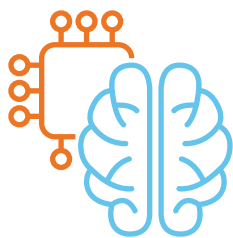
Traceability in food supply chains is crucial. Traceability is being able to track shipping containers and goods accurately and in real time. It provides the data to find blind spots in performance and fix them to further improve supply chain efficiency. One technological advancement improving traceability is the Internet of Things (IoT), which refers to increased interconnectedness between technological communication networks. Traceability can help make food safer and get to its destination quicker, especially when it comes to the U.S. cold chain market, which is **projected to grow 16.8%** from 2020-2023.



Another benefit of traceability is that it enables supply chain leaders to pinpoint challenges in their supply chain and correct them. For example, a traceability system might note that transportation on one particular leg is regularly delayed by traffic. If they prioritize getting product out to that leg before other legs, they might fix this issue and reduce late arrivals.

► AI & Machine Learning in the Food Industry

Artificial Intelligence (AI) has made its mark on the **meat industry**. Many companies have invested in machine cutting technology that has performed well with uniform size and type meat. A recent academic article has identified many opportunities for **AI investment throughout the supply chain**.



Alongside less errors, AI also has the potential to speed up processes with less risk of injury. Another way automation and machine learning in the meat packaging industry can help companies is through reducing energy and costs. According to the meat researchers at the V.M.Gorbatov All-Russian Meat Research Institute, AI technology can lead to a **significant decrease in electricity use by up to 2.4x**.

Meeting Customers Half-Way: Delivering the Quality they Deserve

Better Packaging Leads to Better Customer Experience

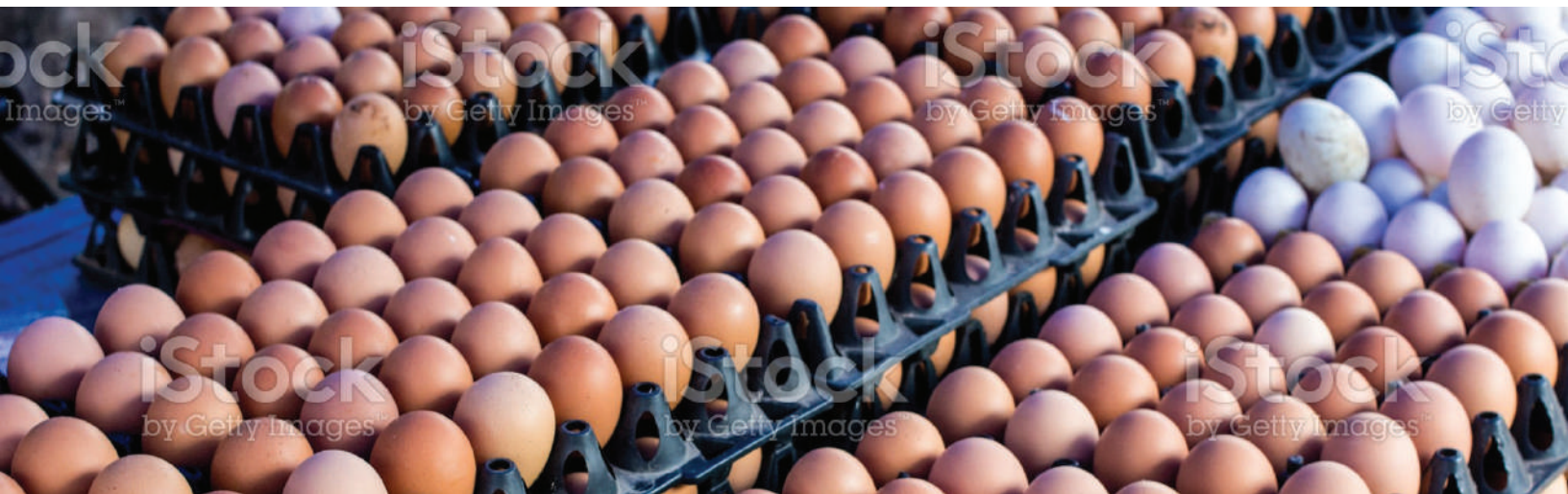
As inflation demands increased cost, it is crucial that the quality of meat meets customers expectations. Investing in product protection can help increase the quality of product when it reaches the stores. As customers are forced to pay more for the meat they buy, they are expecting the quality to stay the same or increase. If company-wide price hikes are unavoidable, preventing damage is a crucial step to avoid alienating customers during inflation.

Better packaging allows for less damage to the goods that are being transported and more profit for the sellers. There are sustainable options for packaging that are more cost-effective and sustainable for companies in the long run.

For example, Walmart was able to prevent **37 million eggs from being thrown out** within the first year of switching to reusable plastic containers and drastically reduced the rate of damaged goods.

Better product protection leads to curating a more positive overall in-store experience. The less time consumers have to spend sifting through meat to find the least damaged package, the happier they will be.

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Sustainable Values Can Help Boost Company Growth and Reputation

As prices rise for consumers, farmers are earning less. A hog farmer **50 years ago made 40-50 cents per food dollar** spent on pork compared to the average of only 19 cents today. Ranchers have seen similar decreases for beef. from 60 cents 50 years ago to 29 cents today. In January 2022, the Biden-Harris Administration announced their **Action Plan for a Fairer, More Competitive, and More Resilient Meat and Poultry Supply Chain**. The plan consists of four main strategies for building a “more competitive, fair, resilient meat and poultry sector,” with higher earnings for producers and more affordable options for customers.

As of May 8, 2023 dollar limitations have been placed on meat and poultry products as per the **Food Safety and Inspection Service (FSIS)**. The **Environmental Protection Agency (EPA)** has updated their Meat & Poultry Products Effluent Limitations Guideline and plan to sign the proposal in December 2023. The EPA also has a joint goal with the **U.S. Department of Agriculture** to reduce national food waste by 50% by the year 2030. In the face of these **new policy changes**, it is advisable for companies to incorporate sustainable values and ideas.

Cold Chains

Cold chains are crucial to ensure the quality of the meat being sent to grocers. However, cold chains are very difficult to maintain.

This is largely due to the specific conditions and temperatures the meat needs to remain at in order to be safely consumed. The shipments need to be continuously checked in order to remain stable. There are many federal, state, and local cold chain regulations to adhere to -and durable and secure packaging can help maintain that.

With recent regulations being continuously updated, being aware of sustainable options can not only save your company money down the road, but boost your business model to appeal to more consumers. **The Food Industry Association and North American Meat Institute** released a joint study in 2023 called the “Power of Meat” and found that 52% of shoppers take environmental factors into account while deciding which meat to buy.



Sustainability For Business Growth and Reputation

If you have a sustainability goal, there needs to be a measurable and realistic plan backing it. With measurable goals and intentional language and action, your company can avoid **greenwashing**: the practice of advertising climate-friendly and “green” products and actions that consist of intentional misinformation. According to the **American Marketing Association**, it is simple to avoid greenwashing: use clear language and, although tempting, don’t stretch the truth about your efforts.

An extensive joint study from **McKinsey and NielsenIQ** is one of many that illustrate just how much more consumers are willing to pay for a sustainable product. According to the study, various size brands making Environment, Sustainability, and Governance (ESG) claims grew 8% more than their non-ESG claim counterparts. It is important for companies to maintain an operation that aligns with the brand their customers want to see, and for the vast majority that is sustainability



Why Reusable Plastic Crates

New technology such as automation and traceability can help to make the supply chain more efficient and effective. Protective packaging can help create a better in-store experience, and with inflation producing higher prices, consumers expect quality to increase as well. Sustainable values can help your company manage new regulations. Reusable plastic crates can be utilized for short-term and long-term supply chain success.

Reusable plastic containers (RPCs) and the service model behind them provide the backbone for your supply chain operation to set up systems that are designed with long-term success in mind while supporting short-term wins. Their circular supply chain model and portfolio of various sizes allows for companies to be able to use a single company from source to shelf.



Cost

Reusable containers eliminate the wasted labor of cleaning up and disposing of single-use packaging. RPCs can **cut labor costs down by as much as 53%** as they can help speed up the time needed to restock by using retail-ready containers. For meat specifically, RPCs allow 6% more product to fit per vehicle; thanks to lighter pallets in higher stacks, some customers see up to a **25% transportation cost reduction**. You can calculate how much your company would save using RPCs [here](#).

Efficiency

Reusable plastic containers are an efficient method to transport your products. Tosca's bulk containers fold up, so the amount of space used is far less than their bulky wooden or styrofoam counterparts. Reusable plastic products often stack easily with each other, making them space and labor efficient.

Container pooling is when a third-party service provider rents out assets for companies rather than the companies having to develop, manufacture, and maintain their own. This system of container pooling can be economically and environmentally beneficial for assets like pallets, forklifts, and transportation. It makes sense that the rental market in the U.S. is projected to grow 14% from 2015 to 2025.

Quality

Not only is the durable packaging of a reusable container more efficient (they can go through the supply chain more than 80 times!), but it also leaves your consumers with an overall better quality product. The strong plastic is more likely to protect the goods from start to finish and is also **contaminant-free** so you don't have to worry about your goods being compromised.

Sustainability

The environmental aspect of RPCs during transport is significant. The containers are 100% recyclable and last 22x longer than wood containers. Using the containers, your company can minimize food waste which helps boost your profit as well as decrease your environmental impact.

The sustainable plastic containers can last for years and aid in short and long term successes throughout the supply chain. Reusable plastic containers are the ultimate solution for prioritizing cost, efficiency, quality, and sustainability. For more information, you can **contact us** and get your questions answered by a Tosca expert.

