



Understanding FSMA

How to Ensure Compliance and Food Safety
Across Your Supply Chain

Cherry Tomatoes

Mode	Truckload
Shipment ID	2456455
System ID	F103341
Carrier	TL Carrier
Tracking Method	Integrated
Equipment	Reefer
Temp Req.	33° to 45° F
Current Trailer Temp	40°F Temp History
Length of Haul (mi.)	187
Destination:	Los Angeles, CA

Cherry Tomatoes

Executive Summary

Foodborne illness is a serious cause for concern. Each year in the U.S., about 48 million people get sick, 128,000 are hospitalized and 3,000 die each year from foodborne diseases, according to recent data from the Centers for Disease Control and Prevention. This is a significant public health burden that is largely preventable.

For the transportation and logistics industry, this is a cause for concern due to the high volume of product that is transported via trucks. In the past, the transportation of food and beverages was largely unregulated, but the Food Safety Modernization Act changed that by creating regulations to monitor the supply chain. There are many challenges that shippers and carriers face when it comes to handling food, but software solutions can help trucking companies overcome those challenges by providing real-time visibility and monitoring of food shipments in their respective supply chains.

In this eBook, Trimble Transportation will define the landscape that shippers and carriers operate in when handling food and beverage loads, the challenges they face, and how to overcome those challenges. By using technology solutions, shippers and carriers can more easily follow the regulations set forth by the FSMA and prevent the transportation of food and beverages from being the cause of foodborne illness outbreaks.

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Salad Dressing



Lettuce

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There are certain steps that **shippers and carriers** can take to guarantee they are following regulations, and there are ways to improve business operations, such as **using a solution to improve supply chain monitoring** and relations with carriers.

Introduction

Headlines such as “Many sickened by foodborne illness linked to lettuce,” and “Bagged salad recall” tend to attract extensive media coverage. Following these reports, the search to find out who is responsible for the illnesses begins. Did something go wrong when it was being grown? Was it properly transported, or did it spoil on the shelf? No matter the case, the outbreak was a danger to consumers, and that’s not the kind of publicity any business wants.

Due to the rising number of foodborne illnesses in the early 2000s, Congress decided it was time to make improvements, due in large part to support from the Grocery Manufacturers Association. The new regulations set higher standards for handling food throughout the supply chain, and since June 2017, companies transporting food have had to comply with the Food Safety Modernization Act (FSMA). This presented challenges such as increased accountability, improved monitoring of the supply chain, quicker adoption of best practices and more collaboration within the industry.

For the transportation and logistics industry, this meant that they had to find new ways to ensure that trucking companies were compliant with the newly formed laws. There are certain steps that shippers and carriers can take to guarantee they are following regulations, and there are ways to improve business operations, such as using a solution to improve supply chain monitoring and relations with carriers. These steps can go a long way in enhancing the supply chain and preventing foodborne illness outbreaks due to poor or improper transportation.


In this eBook, Trimble Transportation will define what the FSMA is and how it affects transportation and logistics, some of the challenges that shippers and carriers face, and how to overcome said challenges to ensure that companies are making the most of their opportunities.

Defining FSMA and Food & Beverage Shipping Industry


The FSMA is transforming the nation's food safety system by shifting the focus from responding to foodborne illness to preventing it. Congress passed the FSMA in response to dramatic changes in the global food supply chain and in our understanding of foodborne illness and its consequences, including the realization that preventable foodborne illness is both a significant public health problem and a threat to the economic well-being of the food industry.

The FSMA was signed into law by President Obama in 2011, but it wasn't until June 2016 when the most recent amendment affecting transportation was finalized, with it initially going into effect in 2017. The law became the first major legislation addressing food safety since 1938; it was deemed necessary due to several foodborne illnesses during the first decade of the 2000s. One of the main reasons the legislation passed through Congress so quickly was due to the support and sponsorship of the Grocery Manufacturers Association. The outspoken organization was aware of how much money that illnesses cost the food industry – billions of dollars in recalls, lost sales, insurance fees and legal expenses.

That is not to say the transportation industry didn't have regulations in place already. In 2005, the Sanitary Food Transport Act (SFTA) was enacted and established the groundwork for shippers and carriers keeping records on the transportation of food. It required the U.S. Food and Drug Administration (FDA) to determine sanitary transportation practices to ensure that food (including animal feed) transported by motor vehicle or rail was not transported under conditions that may adulterate the food. And, while the SFTA stated that trailers should be cleaned, there were not any guidelines on how that process should be done or how often. So, it was lacking specifications. That's why the new FSMA was intended to supplement the SFTA, not replace it.



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The trucking industry has to follow **strict regulations** to ensure that food is properly handled throughout the transportation process **including:**



Temperature Control/Tracking



Training



Temperature Certification/Data Exchange



Data Retention



Cleanliness

The FDA finalized seven major rules to implement the FSMA, recognizing that ensuring the safety of the food supply is a shared responsibility among many different areas in the global supply chain for both human and animal food. The rules are intended to define specific actions that must be taken in each of these areas to prevent contamination. While there are exceptions, such as the exclusion of farmers, ranchers and local processors from federal oversight, the trucking industry has to follow strict regulations to ensure that food is properly handled throughout the transportation process. This includes:

○ **Temperature control/tracking:**

For refrigerated products, every storage compartment must be pre-cooled and have a temperature monitoring device. Shippers must also define temperature specifications to be met throughout transportation.

○ **Temperature certification/data exchange:**

A log of temperature conditions for the duration of the transportation must be provided to the receiver/shipper by the carrier upon request.

○ **Cleanliness:** Vehicles must be maintained in a sanitary condition and are subject to inspection. Loading/unloading stations must have handwashing facilities.

○ **Training:** Carriers must provide basic sanitary transportation practice training to their personnel.

○ **Data Retention:** All records must be stored for a period of 12 months.

While transportation is just one aspect of the supply chain in the food and beverage industry, it is an area that is just as important as any other. Considering that transportation is one-third of the supply chain – from farms, to transportation, to stores/restaurants before reaching consumers – all parties are tasked with working together under the regulations outlined by the FSMA to ensure that food reaches consumers in a safe manner and to prevent foodborne illnesses.

Problem/Challenge

New regulations mean changing outdated operations. One challenge that has plagued the industry for years is the lack of collaboration between shippers and carriers. This is a constant battle when food transportation is involved, because whenever a widespread foodborne illness outbreak occurs and points back to the transportation of the product, shippers and carriers consistently try to shift the blame. When neither party is working together, an outbreak is more likely to take place.

Another challenge that the trucking industry faces is adhering to the food product transportation parameters that are outlined in a shipper/carrier contract. Most foods have certain transportation guidelines, largely involving transport temperature range. By law, shippers are required to monitor the condition of their product as it travels through the supply chain until it reaches the customer. However, some carriers don't have the systems in place to track trailer temperature conditions, which creates further division between shippers and carriers.

The main challenge of FSMA compliance is ensuring that no freight is lost to foodborne illnesses by making sure that it is loaded correctly, and not potentially contaminated

during transportation. For trucking, that means following the guidelines outlined above that involve monitoring temperature controls, temperature certifications, cleanliness, training (food handling) and data retention. If the regulations aren't followed, the FDA has three primary mechanisms for enforcement when it comes to imposing direct penalties for non-compliance: re-inspection fees totaling about \$225 per hour, product recalls or suspension of facility registration. These consequences can be disastrous for shippers and carriers alike, not only because they lose revenue, but because it hurts their reputation during future transactions.

Before freight visibility solutions were available, shippers were unaware of what was going on while a shipment was in the hands of the carrier. Consequently, if a foodborne illness was linked to the transportation of the food or beverage, the shippers would automatically blame the carrier. But the addition of the FSMA, along with the advent of visibility solutions, has shifted the burden of responsibility back to the shippers. They are required to know how their product is handled at all times within the supply chain.



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However, more is at stake than knowing who is responsible for a foodborne illness, because sometimes it isn't linked to the transportation process. But, both shippers and carriers should be aware of the fact that foodborne illnesses cost the U.S. an estimated \$152 billion per year in healthcare, workplace and other economic losses, according to a report published by the Produce Safety Project.

When a foodborne illness is detected, all of that specific product is lost, which sends ripples down the supply chain. Shippers not only lose the potential earnings from product sales, but they also must discard any of the merchandise that is still in transit. An added economic loss occurs when their goods aren't on the shelf and a consumer chooses the competitor's product. They may continue to purchase the competitor's merchandise even after the shipper's product is deemed safe, which results in the continuous loss of customers.

If the illness is linked to the transportation process, the carrier is hit hard. They will lose the earnings from the load and have to pay insurance claims. At the same time, the shippers might choose to use a different carrier the next time, which impacts future revenue.

The company's brand image absorbs the most impact of being linked to a foodborne illness. For shippers, there are plenty of competing products on the market that consumers can choose rather than returning to their product. Carriers run the risk of losing drivers to competing businesses that haven't been linked to an outbreak, which, due to driver shortage, can be detrimental to a carrier's business.

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How to Overcome

The main answer to these challenges is to implement a freight visibility solution. Prior to the institution of the FSMA, data tracking was performed using manual processes or inefficient software solutions. Often, there were discrepancies between shipper and carrier data, which made it more difficult for authorities to determine who was at fault when a foodborne illness was caused by improper transportation. But with a third-party solutions provider, shippers and carriers can accurately track freight. Both parties are more inclined to accept information from a third-party provider because it is unaltered.

A freight visibility solution can track a shipment's location as the carrier travels to the destination. It can also monitor the temperature within the trailer to ensure that the product is stored in the proper temperature range during transport. The added benefit is that both shippers and carriers can see the clean data, which ensures that shipments arrive to their destinations according to the standards set by the FSMA.

Most importantly, both the shipper and carrier are required to meet the standards of food and beverage transportation. When guidelines aren't met, both lose out on potential earnings and may face heavy fines, especially when a foodborne illness is linked directly to the transportation process. FSMA regulations that a freight visibility

solution is unable to monitor and which human error can factor into include:

- The transport trailer must be designed and made from material that can be adequately cleaned and sanitized. One of the concerns was that "adequately cleaned and sanitized" was not clearly defined. Considering the quantity of the requirements, it was up to the shipper to make that determination.
- Product must be maintained in a sanitary condition that will ensure overall food safety. For instance, broken pallets that could puncture the product might not be allowed in trailers.
- Product must be appropriately stored to prevent pests or contamination that could result in food becoming unsafe.

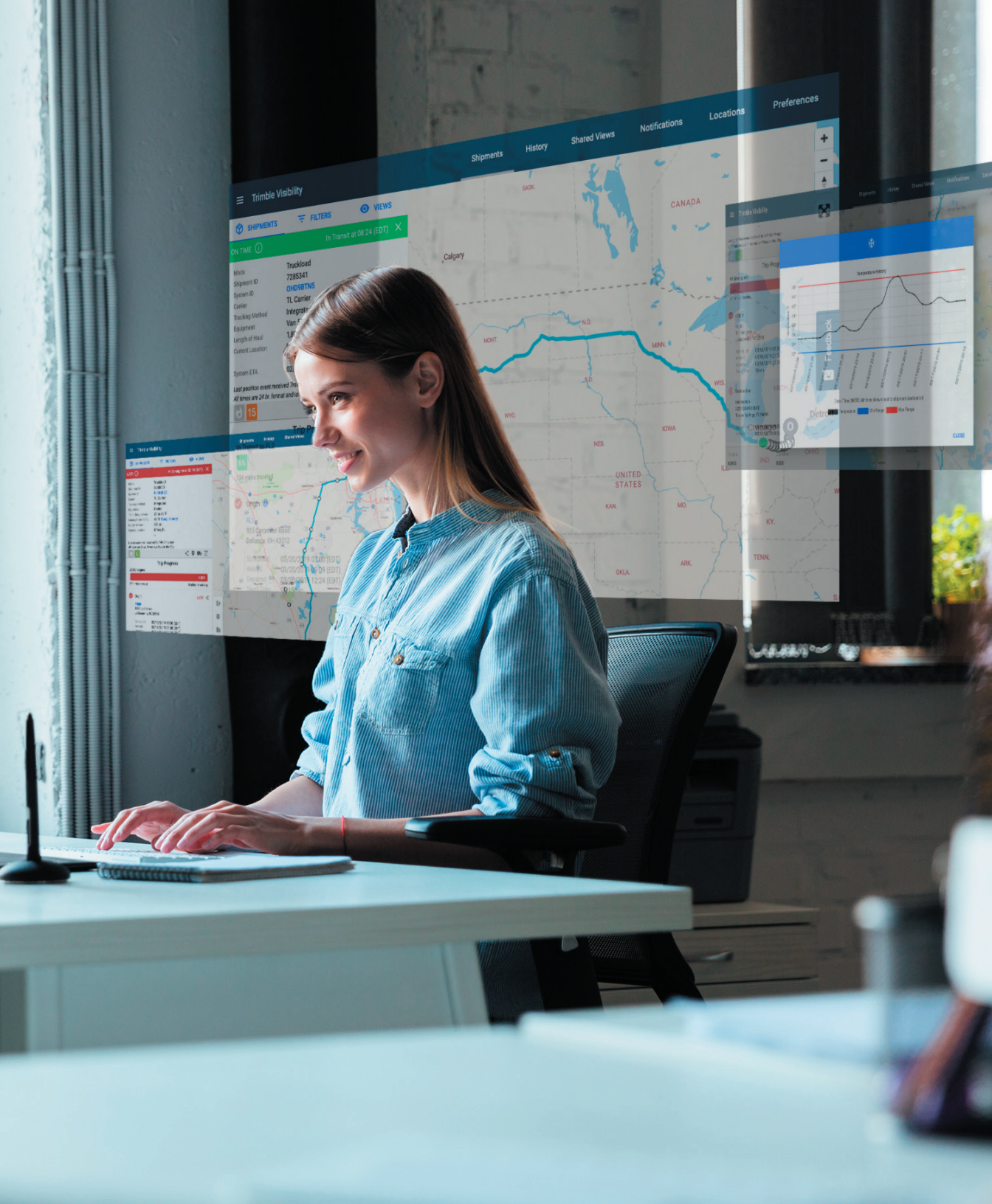
In the segmented atmosphere of the transportation and logistics industry, shippers and carriers would take any action necessary to make the best decision for their business. But by using a third-party solutions vendor, the two can monitor data in the system and work closely to ensure that the transportation of the food and beverages follows FSMA regulations. When shippers and carriers work together and share accurate information, the likelihood of lost freight decreases.

By using a third-party solutions vendor, the shippers and carriers can **monitor data** in the system and **work closely** to ensure that the transportation of the food and beverages follows **FSMA regulations**.



Corn

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Summary

With the increase in sickness and deaths caused by foodborne illness, Congress decided it was time to act. In the early 2000's, it enacted the Sanitary Food Transport Act. The law stated that shippers and carriers had to start logging certain information about the handling of food and beverages during the transportation process. While the new law wasn't very successful, it laid the groundwork for tighter regulation. Since June 2017, companies transporting food have had to comply with the Food Safety Modernization Act. The updated law required shippers and carriers to track things such as temperature monitoring, exchange of logging data, cleanliness records, training for proper food handling, and data information for the prior 12 months.

As with any new policy, there were challenges to overcome. The main obstacle was the lack of collaboration between the shippers and carriers. Often the data didn't align because of disparate processes in place which were both automated and manual. With shippers and carriers using different methods to track loads through the supply chain, responsibility for any foodborne illness linked to transporting products was placed on the carrier.

The FSMA changed the burden of responsibility back to the shipper. Now, they have to monitor the loads to ensure that they are transported according to the proper food safety regulations. In addition, the rise of freight visibility solutions has enabled shippers and carriers to share data more openly and freely through trusted, third-party vendors. By doing so, shippers and carriers can make sure that they are compliant with food safety transportation laws, which helps prevent the transportation of products from causing a foodborne illness outbreak.

Trimble enables shippers and carriers to monitor their freight from the time it leaves the warehouse to the time it reaches the customer. By providing insight into temperature control and location tracking, shippers and carriers can ensure that food and beverage products are transported according to FSMA regulations and that both parties are following the rules outlined by the contract. In the end, the improved collaboration will help prevent the transportation of products from being responsible for foodborne illness outbreaks.

Trimble Transportation

Trimble Transportation provides solutions to create a fully integrated supply chain, helping customers make more informed decisions and maximize performance, visibility and safety. With an intelligent ecosystem of products and services, Trimble Transportation enables customers to embrace the rapid technological evolution of the industry and connect all aspects of transportation and logistics — trucks, drivers, back office, freight and assets.

Choosing the right visibility platform to help your team overcome rising costs in your supply chain is crucial but shouldn't be difficult or time-consuming. Let our visibility team help you discover why more CPG companies are leveraging the power of our supply chain visibility platform to reduce shipment risks and keep overall supply chain costs at a minimum. Schedule a custom demo for your team or contact us for more information on the benefits of supply chain visibility today.



Contact Us

Phone: [+1 855 218 5770](tel:+18552185770)

Website: transportation.trimble.com

