FSMA: What You Need to Know About Transporting Food

*A Simplified Guide to the Food Safety Modernization Act*

The U.S. government has introduced new rules and regulations to ensure the safety of food throughout the supply chain. The rule introduces a new set of requirements for food manufacturers, processors, transporters and distributors.
The FDA Food Safety Modernization Act (FSMA) is the most sweeping reform of U.S. food safety laws in more than 70 years, and it imposes requirements on shippers, loaders, carriers and receivers of food. It aims to ensure the U.S. food supply is safe by shifting the focus from responding to contamination to preventing it. The law also provides the FDA with new enforcement authority designed to achieve higher rates of compliance and to better respond to problems when they do occur. It also requires that imported foods be held to the same standards as domestic foods, and directs the FDA to build an integrated national food safety system in partnership with state and local authorities.

A summary of the seven rules included in FSMA can be found below.

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<th>Preventive Controls for Human Food</th>
<th>Preventive Controls for Food for Animals</th>
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<td>Creates three new requirements for the production of human food: 1) Facilities must establish and implement hazard analysis and risk-based preventive controls; 2) Modernizes regulations around manufacturing, processing, packing, or holding of human food and 3) Clarifies the scope of the exemption for farms.</td>
<td>Establishes two new requirements for the production of animal food: 1) Requirement to register with FDA as a food facility and 2) Facilities must establish and implement hazard analysis and risk-based preventive controls for food for animals.</td>
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### Who is affected by FSMA?

FSMA affects almost everyone involved in the United States food supply chain. Companies that are exempt from portions of the rule include the smallest local food producers with revenues under $500,000 a year and with primarily local sales. This exemption of the rule is designed to preserve local food systems and keep them within state and local regulations.

The final rule applies to **shippers, receivers, loaders and carriers** with average annual revenues above $500,000 who transport food in the United States by motor or rail vehicle. It also affects people in other countries who ship food to the U.S. to be distributed by motor or rail vehicle for consumption in the United States.

- A **shipper** is a person who arranges for the transportation of food in the United States by a carrier or multiple carriers. The shipper is responsible for communicating appropriate food handling requirements to the carrier. A person may be subject to these requirements in multiple capacities. For instance, the shipper may also be the loader and the carrier.

- A **loader** is a person who loads food onto a motor or rail vehicle used during transportation operations.

- A **carrier** is a person who owns, leases, or is otherwise ultimately responsible for the use of a motor or rail vehicle to transport food. The carrier is responsible for ensuring compliance with requirements during transport. Carrier does not include a person transports food while operating a parcel delivery service.

### Produce Safety

Establishes science based standards for growing, harvesting, packing, and holding produce on domestic and foreign farms.

### Foreign Supplier Verification Programs

Requires importers to verify that foreign suppliers are producing food in a manner that meets U.S. safety standards and achieving the same level of food safety as domestic farms and food facilities.

### Third-Party Certification

Establishes a program for the accreditation of third-party auditors to conduct food safety audits and issue certifications of foreign facilities producing food for humans and animals.

### Sanitary Transportation

This rule is intended to ensure that sanitary practices are used during the transportation of food. Examples of requirements include: 1) inspecting a vehicle for cleanliness prior to loading food that is not completely enclosed by its container, 2) maintaining and verifying the cold chain by pre-cooling vehicles 3) outlining sanitary requirements for the transportation of food in writing, including temperature requirements and 4) maintaining and providing records that demonstrate sanitary requirements have been met.

### Intentional Adulteration

Requires domestic and foreign facilities to address vulnerable processes in their operations to prevent acts intended to cause large-scale public harm.
• A receiver is any person who receives food after transportation, whether or not that person represents the final point of receipt for the food. A receiver may be a carrier or a shipper but not individual consumers or others who are not in the business of distributing food.

FSMA does not apply to food transshipped through the U.S. to another country or food that is imported for future export.

What types of food are affected by FSMA?
Foods affected by this rule include:
• FDA-regulated human food including raw materials and ingredients
• USDA-regulated meat, poultry and egg products
• Molluscan shellfish such as oysters and scallops

Foods not affected by this rule include:
• Foods completely enclosed by a container
• Compressed food gasses
• Human food byproducts for use as animal food without further processing
• Live food animals

How are shippers affected by FSMA?
Shippers are primarily responsible for determining appropriate transportation operations and documenting and communicating procedures to parties across the supply chain. Shippers must develop and implement written procedures to ensure equipment and vehicles are in appropriate sanitary condition and free of contaminants from previous cargo. They must also specify adequate temperature control requirements for the transportation of perishable commodities.

The rule requires shippers to maintain records that demonstrate that they provided this information to carriers.

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Along with receivers, shippers are required to provide hand washing facilities to vehicle operators if they are expected to handle unpackaged foods.

How are carriers affected by FSMA?
For food subject to temperature control requirements, the rule requires carriers to demonstrate that the refrigerated vehicle has been satisfactorily pre-cooled. Carriers are also responsible for providing temperature records upon request to demonstrate appropriate temperature ranges were maintained during transportation. Carriers and shippers must agree on adequate temperature monitoring and record delivery options.

The rule also requires carriers to provide information to shippers and loaders (when requested) about previous cargoes hauled in bulk vehicles and the intervening cleaning of those vehicles.

How are receivers affected by FSMA?
Under the rule, receivers are required to provide hand washing facilities to vehicle operators if they are expected to handle, load or unload foods that are not completely enclosed.

The receiver may also request proof from carriers that they have maintained appropriate temperature controls for the food during the transportation cycle before accepting a load.
Specific FSMA requirements of interest to carriers, loaders, shippers and receivers

Temperature Control and Tracking: Vehicles transporting temperature sensitive foods must be equipped with adequate temperature measuring and recording systems.

Transportation Asset Pre-cooling: The shipper must develop and implement written procedures that specify the required cold storage compartment pre-cool temperature and adequate temperature ranges during transportation.

Cleanliness: The shipper must develop and implement written procedures to ensure vehicles and equipment are in appropriate sanitary condition for the transport of food—preventing contamination of ready to eat food from contact with raw food, protection of food from contamination by non-food items in the same or previous load, and protection of food from cross-contact.

Both shippers and receivers must provide hand-washing facilities to those vehicle operators handling unpackaged foods.

A carrier must be able identify previously transported cargoes to the loader or shipper unless sanitary actions are taken prior to loading cargo to a vehicle.

Temperature Certification and Data Exchange: The shipper must specify cold storage compartment pre-cool temperature requirements to carriers as well as appropriate temperature ranges during transportation. It is the responsibility of the carrier to demonstrate to the shipper, loader or receiver (upon request) that the cold chain was maintained.

Training: Carrier personnel must be trained in sanitary transportation practices when the carrier and shipper agree that the carrier is responsible for sanitary conditions during transportation. The training must be documented.

Data Retention: Shippers and carriers must maintain all transportation and training records for a period of 12 months, and must make them available to any authorized party promptly upon request.

How ORBCOMM can help

ORBCOMM offers a suite of products designed for temperature monitoring and control of refrigerated vehicles. Our solutions enable carriers to perform functions like pre-cool trailers, monitor for temperature violations and provide a complete temperature profile during trips.

To learn more about how ORBCOMM can help your fleet become FSMA compliant, contact us at sales@orbcomm.com

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ORBCOMM Cold Chain Management Solutions

ORBCOMM solutions are specifically designed to assist cold chain asset owners with location-based information, comprehensive fuel and temperature management, as well as alerts of operational failures that can affect cargo. Our devices work with cellular, GPS and optional global satellite communication and have connections for fuel sensors, on/off switches and shut-down detection.

Our asset management solutions have been deployed globally, and are trusted by some of the world's leaders in cold chain management.