

Learning with Pigs

Changes in transportation and the supply chain

S Supply Chain

How does food get to the grocery store? The term **supply chain** is used to describe the steps involved in the production, processing, and distribution of a commodity. Commodities are things like food, fuel, and fiber. The chain begins with the equipment farmers need to produce food, such as seeds, fertilizer, and machines. Farmers then plant, maintain, and harvest crops or raise animals. The food is cleaned, processed, and packaged before being shipped to grocery stores and into the hands of consumers.



Transportation and the Supply Chain

Transportation is a critical part of the supply chain. **Transportation**, or the movement of goods, is needed in each step of the supply chain. Today we live in a global marketplace for food. Some regions cannot produce certain foods due to population density (lack of farmland), seasons, and climate and soil conditions. Consumers living in these regions rely on farms in other areas to produce their food supply.

Transportation of Livestock



Livestock are animals like cattle, sheep, and pigs. Livestock are raised to help feed the world. Farmers work with veterinarians and farm hands to keep their livestock healthy. When livestock are grown farmers sell them. Livestock are sold to be **processed**. Processing

animals turns them into products humans use. Products like bacon, chicken nuggets, and leather.

To get to the processing plant, livestock have to be **transported** (moved). Animals used to be transported on foot. Moving livestock on foot was hard. People had to make sure their livestock didn't run off, get stolen, or killed. Traveling on foot also took time.

The development of the railroad made transporting animals easier. Livestock could travel further and faster by train than on foot. Transportation can be stressful for animals. Special rail cars were designed to make the journey more comfortable for livestock. A rail car with slats and water misters was invented by Charles J. Karbach. This invention helped to keep animals cool and watered on long journeys. New laws were also created. The **Twenty-Eight Hour Law** controlled how long animals could be in transport without a break. Despite new inventions and laws, livestock would still die on the rail journey. As time went on, railroads became less popular for transporting livestock.

Today we use **semi-trucks** and livestock trailers to move animals. Using a semi-truck allows travel to remote locations. Semi-trucks provide a smoother ride for livestock. Having a smoother ride lowers stress on animals. Less stress lowers the chance of injury and death of livestock. **Livestock trailers** are specially

designed to keep animals safe in transit. The trailers are also designed to make it easy to clean. Keeping a trailer clean lowers the chance of disease spreading from one farm to another. The development of the interstate system has made semi-trucks the preferred way to move animals while following the Twenty-Eight Hour Law.

