

Cold chain must be uninterrupted connection

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How did fruits and vegetables get from the country farms across long distances to the big-city markets back in the early years and still maintain freshness? They probably arrived in a tired condition, especially during the summer.

The first refrigerated boxcars were used in 1851, but they were able to operate only during the cold winter months. Fresh meat was placed directly on ice, which darkened the product, altered the taste and ultimately proved to be impractical.

In 1867, an Illinois horticulturist named Parker Earle was the first to experiment with a refrigerated railcar that would carry fresh fruit to markets. He filled a large wooden chest with 100 pounds of ice and a second chest with 200 quarts of strawberries and shipped them by railroad to the Chicago market. The berries arrived in perfect condition. This was the dawn of the cold chain in the produce industry.

The cold chain refers to maintaining the temperature of fresh food products from the farms through the packing and shipping system to the retail shelves. Any break in the cold chain could result in substandard quality and potential food-safety issues.

There are various links in the cold chain, and all play a vital role. We live in a global business world today, with fresh fruits and vegetables being transported to distant markets. These items are found in supermarkets around the world. Grapes from Chile, asparagus from Peru, citrus from Australia and apples from New Zealand are just a few examples of fresh produce shipped over great distances. The assurance that such transport of shipments is heavily temperature controlled relies on teamwork among all international trading countries.

Jelger de Vriend, managing partner of Innovative Fresh in the Netherlands, said, "We need what I call a 'partnership for quality from field to retail shelf.' This involves all key players in the cool chain. We will need to learn to deal with the transparency and responsibility it creates and will need to move away from the world where temperature monitoring in the cool chain is done only to check whether transport was according to specification. Instead, temperature monitoring has to serve optimization of shelf life and taste. We should never forget that in the end, we are all working for the consumer. We must give the customer excellent products by revolutionizing the way we manage quality in the cool chain by working together in this partnership for quality."

People have spent many years learning the process of packing and shipping fresh produce and floral products efficiently and safely through the cold chain system. From shipping point to the consumer, companies know the importance and sensitivity of each

function along the line in order to keep food fresh. The role of every single worker is of a high priority in order to deliver product to the final destination with full integrity.

The precise knowledge about the cold chain process is necessary in order to satisfy the needs of consumers. Whether shipping fresh fruits and vegetables or floral products, the proper temperature controls must be provided. The success of both industries relies on knowing how to adapt to every shipping circumstance.

Ken Hopps, managing director of Blue Latitude LLC, a mass-market floral distributor based in Chicago, explained, "The cold floral supply chain suffers the most from lack of education on the dramatic and positive effects that properly executed cold supply chain can have on the quality, freshness and vase life of the flower. The floral supply chain is only as strong as its weakest link. If everyone knew and understood the effects of a break in the cold supply chain, everybody would do anything in their power to maintain the links in the cold supply chain. A cold chain culture must be hammered along every avenue of the cold supply chain. Logistically speaking, there are many handoffs as the product is transported from the farm to the store. The weakest link in the floral supply chain is often the point at which the flowers are tendered at the airport of origin and the inability to consistently measure and manage the temperature from this moment on. Too often, the temperature at this point already exceeds the maximum acceptable cold temperature, [resulting in] unnecessary loss of vase life."

Yet with all the training, regulations, new equipment and modern technologies, there are still fractures in links along the cold chain that occur. Just recently, I witnessed a load of produce and floral being delivered to a supermarket. Before entering the store, I spotted several pallets sitting outside the back door in the sun. After shopping for 25 minutes, I left and saw the same pallets still sunbathing in the 90-degree temperature. Companies have a responsibility to train and retrain employees in the proper management methods of the cold chain. Everyone must value and respect this very sensitive process.

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