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POV > FRESH PRODUCE

Intelleflex asks industry experts their point-of-view on cold chain issues July 2012

What is the weakest link in the cold chain?

Dr. John Ryan, President, Ryan Systems

As product moves through the cold chain, it is transferred from one type of transportation to another or from a transporting unit into an inventory location where it is held until the next transfer. There is abundant data available to show that the greatest temperature variation generally occurs not during transportation or in the inventory location, but during the transfer point between the two. Such variation indicates lack of control over the shipment.

Dr. Jean-Pierre Emond, Director of Cold Chain Research, Georgia Tech

Any step in the cold chain could become the weakest link. If a portion of the supply change incurs temperature damage, it makes the cold chain initiatives before and after irrelevant, as one step could ruin the product and/or dramatically reduce quality and shelf life. If all handlers during the cold chain process were educated about the end result of temperature damage, they may be more vigilant on maintaining the proper cold chain, as they would better understand their impact.

Steve Dean, General Manager, ProWare Services

The weakest link could happen because employees managing the product don't understand the importance of the cold chain. As a result, product from the field can end up waiting at high temperatures until someone is available to get it ready for the precooler. And, when there's a high volume of product, it affects perception of when product is sufficiently precooled, and the product doesn't reach the ideal storage temperature. It's essential that all of the people managing your product understand the importance of the cold chain and its impact on quality and your brand.

Mike Nicometo, Founder, FreshXperts

The single biggest threat to delivered quality and freshness is the "cut to cool" link from harvest to pre-cool. Because the product is losing shelf life much faster at higher temperatures, for every *hour* during the "cut to cool" link, the product is losing up to a *full day* of shelf life. In a 15 day supply chain, you can easily lose 4 to 8 days due to delays in getting the product properly pre-cooled! The only way to know where problems are in a given cool chain is to measure the complete cool chain, including the post harvest 'cut to cool' time.

Peter Mehring, President and CEO, Intelleflex

Pallet-level temperature monitoring and management throughout the supply chain is essential for ensuring the delivered freshness of produce. Simple room-level monitoring for pre-cooling results in inconsistent pallet-level temperatures, directly resulting in reduced shelf life. Because of the wide variation of produce temperature coming in from the field, it is critical that each individual pallet's temperature be properly managed to ensure the product is sufficiently chilled. Since there are no visible indicators when removing pallets from pre-cool, actual pallet-level temperature monitoring is the only method to ensure reliable pre-cool results.

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