

# RFID Shelf-life Monitoring Helps Resolve Disputes

By attaching RFID-enabled sensors to shipments of perishable goods, producers and retail buyers can identify spoilage, and its causes.

By Terry Myers

June 4, 2007—For producers and retail buyers of perishable products, one of the biggest challenges is the timely identification of spoilage, and its causes. From farm to fork, there are many points in the shipping and storage process where damage can occur, and it is often difficult—if not impossible—to accurately identify in whose custody specific damage occurred.

Traditionally, this has often resulted in a game of "he said, she said," with shippers, producers and buyers all pointing fingers at each other as they attempt to absolve themselves of responsibility. Even with loggers, gathering an accurate picture of a shipment's cumulative history is sometimes difficult to decipher easily, and is almost impossible without downloading a lengthy temperature history. What's more, waiting for a detailed history is very difficult when using a handheld device.

RFID sensor monitoring technology is revolutionizing the supply chain industry, but one of its most tangible advantages is the ability to flag aberrations quickly in the shipping and receiving process. New monitoring technologies are enabling users to answer questions regarding what happened when spoilage occurred, who was responsible and, most importantly, what can be done to prevent the shipment from being tossed.

Ultimately, this can reduce invoice disputes—and when problems do occur, it can make dispute resolutions fast and accurate for producers and retail buyers alike. These technologies use real-time, on-board calculations with call-to-action information using standard UHF RFID [EPCglobal](#) "no wait or delay" tactical results.

When most people consider RFID in the shipping process, they think of tracking packages. While this is an important function, another use for this technology is emerging: monitoring not only the temperature but the shelf life of perishable items, including meat, vegetables, medicines and flowers, at every stage of the so-called "cold chain."

If, for instance, a shipment of roses leaves a farm in Ecuador on March 28, then arrives limp and wilted in New York a week later, the damage has already been done. RFID shelf-life monitoring can immediately notify the receiver's QA department that the shipment was held up in customs in Miami, enabling decisions to be made regarding how to proceed—for example, rerouting the shipment to a Miami distribution center, speeding up the transport, lowering the transport temperature or disposing of the shipment.

RFID monitoring can answer key questions accurately and quickly: Did temperature abuse occur during transport? Was the product left in customs for too long? Or did it spoil while sitting on a shipping dock on a hot summer day? Answering such questions often leads to a guessing game, or a reconstruction of events that relies on estimating conditions—several weeks after the occurrence. This type of discovery process often

results in time-consuming and imprecise accounts, making the primary activity the recuperation of losses rather than saving the shipment.

Breakthrough supply chain RFID shelf-life monitoring has the potential to render this process obsolete. A combination of radio frequency tags with shelf-life monitoring and Web-based RFID database portals enables both producers and buyers to be notified of key changes regarding the custody and condition of the shipment. By tagging cases or pallets, and tracking the shipment's condition, producers, buyers and shippers can not only gain insight into what happened, but also work together to save the product. In other words, they can transform their cold chain into a *quality-driven* cold chain.

RELATED\_ARTICLES Furthermore, this qualified action information is available immediately at the RFID portal, or via a GPRS connection, and because the data is a summary (as few as two digits on a 100-point scale), further downloading and analysis is available in the event of a serious dispute over liability. At the same time, the data removes real-time delays and clogs at the host or reader, while providing real decision value that permits plenary inventory uptime and still allows quality detailed supervision of incoming products.

This new level of "product integrity" monitoring offers more benefits than just the reduction of time spent in resolving invoice and insurance disputes. It also provides a greater understanding by all parties in the cold chain as to the how well the quality of the product has been maintained. And this translates into increased sales.

*Terry Myers is CEO of Infratab. The company's Freshtime tags and software empower perishable producers and their partners to monitor, track and trace the freshness of items throughout the cold chain.*

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