

Overcoming Perishable Shrink

Thomas R Cutler details the technology solutions available for manufacturers to minimise perishable shrink

Perishable shrink costs retailers a tremendous amount of money every year. Vulnerable items such as meat, dairy, fruit, vegetables and flowers can expire prematurely due to inappropriate temperature conditions in the supply chain. Transportation and interim storage at the distribution centre affect the final quality of the saleable product. Consumers are quick to judge the product based on appearance and remember when a product does not meet their expectations.

Gary Nowacki, CEO, TraceGains, suggested, "There are technology solutions available for overcoming the high cost of perishable shrink and they must prioritise inventory and shipments based on FEFO: First Expired, First Out." The FEFO concept is based on the following core ideas:

- Temperature control must be monitored.
- Temperature varies greatly inside a storage room, container or truck.
- Even slight temperature variation affects the remaining shelf life of the produce, and temperature exposure has a cumulative effect.
- Identifying the temperature exposure of individual pallets or cases of produce allows prioritisation on the basis of the remaining shelf life, instead of simple transit and storage times.

To determine how different temperatures cumulatively affect the remaining life of the product, one must measure the exact temperature accumulations in small granularity within each area of the truck or storage facility in conjunction with shelf-life modelling. Solutions must automatically calculate expiration dates of perishables when received at the dock as well as document trip-level temperature data of items, cartons or pallets for a more successful conflict and dispute resolution.

Assuring freshness for the entire refrigerated food supply chain requires much more than just a cold chain and cold storage solution. A complete end-to-end temperature traceability is needed for all temperature-sensitive products as well as predicting the remaining shelf-life when products arrive. Traceability programmes must be converted from a cost-centre to a profit centre by using appropriate data collection devices to tie logistical information with temperature data collected at regular intervals throughout transportation and storage on the item, carton or pallet level across any part of the supply chain.

State-of-the-art Technology via Positively Assured Temperature

Traceability requires much more than just temperature readings in the vehicle. Several other features that should be considered include reliable credit card-sized temperature tags which can be easily attached to any container utilising wireless RFID technology. This simplifies tag initialisation and data collection as perishables travel through the supply chain.

To contain costs, battery-powered tags are highly recommended, and they are fully reusable and reconfigurable for future shipments (typically for one year). There is no need to compromise on accuracy and quality assurance (every tag must be calibrated) and solutions must address compliance with EPC data standards and global ISO RFID standards.

Nowacki also urged, "When collecting these data, it is essential that companies can seamlessly integrate into proven full-chain traceability applications for alerting, analysis and reporting, thereby helping companies pinpoint profit opportunities."

A few temperature-tracing technology



firms have collected years of research and analysis of produce and proteins spoilage rates. This information is important because the remaining shelf life must be automatically determined from cold chain temperature profiles captured throughout the supply chain process. The ability to set upper or lower limit monitoring and real time alerts directly impacts the percentage of perishable shrink which is often as high as 50% and usually at 30%.

Through advanced statistical analysis and reporting, companies will gain the ability to trace back and trace forward individual items subjected to complex processing, packing and logistical handling involving commingling and product transformations.

Scalable solutions are necessary in this area, as the need for this temperature tracing exists from the lowest to the highest volume environments. Web-based Software-as-a-Service (SaaS) subscription models can also drastically minimise up-front implementation time and expense.

Larry Miller from Retail Control suggests, "Reducing perishable shrink is the fastest way for presidents and CEOs to drive real profit to

their company's bottom line. By implementing best-in-class processes and practices, smart companies are reducing their store shrink by 10-18% in the first 12 months and an additional 12-15% in the following 12 months, all to drive year-over-year store sales and profit.

True loss prevention only really occurs when loss is prevented before it happens by implementing behaviour changing programmes, practices and technologies whose impact can be measured. Sarbanes-Oxley demands accountability, and this must be preceded by disciplined execution. Achieving this demands a new level of leadership and a new way of thinking about loss prevention." 🍓

Thomas R. Cutler is the President & CEO of Fort Lauderdale, Florida-based TR Cutler, Inc, (www.trcutlerinc.com).

He is the founder of the Manufacturing Media Consortium of 3,000 journalists and editors writing about trends in manufacturing.

He is a member of the Society of Professional Journalists, Online News Association and American Society of Business Publication Editors.

He can be contacted at trcutler@trcutlerinc.com.