Title Predicting product shelf life with real time temperature tracking

Author A. Wong Yen

Citation Program and Abstract. 2007 Australasian Postharvest Conference. Crowne Plaza Terrigal, NSW, Australia. 12 September 2007. 87 p.

Keywords fresh produce; shelf life; tracking

Abstract

A recent study has shown that of an estimated $26billion of perishable food products distributed through the Australian retail and food service distribution channels, $800m in value is lost through waste and spoilage due to poor product handling and cool chain management. A reasonable percentage of this shrinkage occurs at the store level where retailers often find that a product that is perceived upon delivery to be in quality condition, based upon a spot temperature scan and visual indicators, has to be disposed of or marked down significantly to sell long before expected due to the product deteriorating markedly in quality and appearance.

A number of trials with the view of addressing this problem common to the perishable food supply chain are being currently conducted in the USA with selected major fresh produce retailers, their suppliers and transport companies. These trials are utilizing newly developed RFID temperature loggers and web based software solutions developed in Melbourne to provide a unique end to end supply cool chain solution that integrates real-time temperature reporting, traceability and a constantly updated shelf-life calculation that can be securely accessed by the various stakeholders in the cool chain. With the data provided by this application, distribution centres and retail stores can, for the first time, make decisions in regards to which product should be delivered first or from which pallet product should be taken to put on the shelves for sale first based upon a FEFO (First Expired First Out) model rather than FIFO (First in First Out).

In this presentation, Andrew Wong Yen, Technical Manager for Exago Pty Ltd who is providing the RFID hardware and software systems for the trials will provide some background on the trials currently underway and discuss the principles behind the FEFO vs. FIFO concept. Exago is a Melbourne based company that provides its own RFID hardware and web based applications for monitoring all aspects of the supply cool chain. Exago provides solutions for monitoring the product, refrigerated transport vehicles and climate controlled environments used for storage and handling. Exago was incorporated in 2000 and has been heavily involved in Research and Development supported by Federal and State Government and Horticulture Australia who are a shareholder.