The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

Final Copy of Case Study

LOCATION:
Oxnard, CA, US

YEAR:
2011

STATUS:
Laureate

CATEGORY:
Emerging Technology

ORGANIZATION:
Infratab Inc.

ORGANIZATION URL:
http://www.Infratab.com

PROJECT NAME:
Freshtime Grape Pilot for Fresh Table Grapes

PROJECT OVERVIEW

A major grape grower/brand owner wanted to increase revenues by differentiating its products from competitors by freshness. The project involved using Gen2 EPC Global RFID sensor tags to monitor freshness from harvesting in the field through sale. These tags supplied by Infratab had inbuilt temperature sensors, with accuracy of ± 0.2 degrees Celsius. Tags could be controlled by button push or by RFID handheld or fixed readers. The major problems faced were the requirement that processes during the harvest day from the grower/brand owner to storage require any change in harvesting, packing, hauling and storing operations; and also to spending any major amount of capital to set the proper infrastructure of dock door readers, hand-held readers , employing a separate people to take care of these tagging data collecting operations, etc. There was also resistance to full scale implementation of the temperature sensing tags as they were perceived to be monitoring devices, whose use they only found to comply traditionally to federal regulations but nothing more. The challenge was to provide the brand owner with a set of levers that could enable tangible benefits from deploying these tags in the field. The capital expenditure had be supported by providing a case study which could prove the ROI and ensuing benefits from the immensely important data that is the time-temperature history of the grapes. This could be done by the unique use of shelf life calculations that are based on Weibull analysis and a patented 100-point data collection architecture of the tags which enables the brand owner to get insights into the quality level of the inventory without changing their operations at all. The added functionality of track and trace was also enabled with these tags, which could also quicken the technology adoption rate and decrease the resistance that was founded upon the capital expenditure. The Project is currently underway adding predictive analytics to real-time data collected to rank grower performance, manage inventory based upon first expired, first out and sales allocation of product that matches freshness of product to customer demand. Tagging is being extended to customer level to improve the ROI to the different stakeholders in the supply chain.

SOCIETAL BENEFITS

Over pumping aquifers to support increasing food demand is a major problem, so are the unruly climate patterns and demands for bio ethanol. Our technology can help in better inventory management and decrease food wastage. Various sources put the food wastage globally to be anywhere in between 30% to 50%.

PROJECT BENEFIT EXAMPLE

Freshtime is a new lever which will enable the growers to fine tune their harvesting practices, be dynamic and plan their harvesting shifts to minimize the quality loss. A new tool that will help the brand owners to mine data about their fruit quality, right off the field; and, gain insights that can help them to make informed decisions, while allocating their pallets to advance orders , while selling them in such a manner as to decrease their toss rates and adopt pricing based upon freshness.

IS THIS PROJECT AN INNOVATION, BEST PRACTICE?

Yes