Zest Fresh for Produce Growers

Pallet-level Quality Management from Harvest to Store

Solution Benefits:

- Improve delivered quality and reduce rejections and claims at the distribution center by intelligently matching of customer freshness requirements with actual product freshness

- Comprehensive real-time visibility of fresh-cut produce at the pallet level – from field to pack house to distribution – for managing process adherence

- Real-time, event-driven notifications drive a "manage by exception" approach, making it easy for workers to do the right thing every time

- Wireless and automated with no change in processes or additional labor required

- Automatically documents track-and-trace data, with support for blockchain technology, for HACCP and food safety compliance

Zest Fresh™ is the post-harvest freshness management solution for today's produce industry. It provides autonomous, end-to-end fresh food supply chain visibility for proactive decision making to improve delivered freshness and reduce shrink and spoilage due to temperature and handling issues by 50% or more. By tracking the handling and quality of each pallet of produce beginning in the field, Zest Fresh enables seamless matching the actual produce freshness to the retailers' freshness needs with while monitoring adherence to the grower's processes. Zest Fresh addresses food safety traceability requirements, automates receiving and operations, reduces customer rejection rates and improves profitability and brand loyalty.

The Need for Freshness Management

Growers always harvest or pick produce with peak freshness. Ideally, all harvested product is handled and processed according to best practices, but that is often unrealistic and impractical given the challenges of harvest and pre-cool processes, especially during peak periods. Due to time, temperature and processing variables, not all pallets harvested on the same day have the same remaining freshness, and shelf life can vary by as much as five days before it is shipped, leading to significant variations in the remaining freshness of products delivered to retailers. Visual inspections, "pulping" and other legacy approaches cannot determine if the product has sufficient freshness for distribution and sell through. Product shipped with insufficient freshness causes unwanted surprises for the retailer and consumer, leading to claims, penalties, brand damage and lost profits. Growers need to maximize process adherence and match actual freshness with retailer needs to proactively manage produce shelf-life variability. Focusing on delivered quality – matching the dynamic product freshness with the retailer's needs – ensures all shipments will be accepted and your product will always exceed retail and consumer expectations for freshness.

The Challenge

Preserving full freshness of produce through harvest is difficult, as it requires consistent adherence to process regardless of resources, picked volume or climate conditions. For a variety of reasons, the harvest process can quickly overwhelm available resources or facilities. The result is inconsistent delivered quality to the retailer and consumer, and rejected shipments, product claims and lost revenue. Monitoring the ambient

temperature in a trailer or warehouse with USB- or paper-based loggers is inadequate as pallet-level temperatures fluctuate significantly based on handling. Visual inspection and ambient loggers provide data only after a problem has occurred, causing grocers to reject entire shipments. Even when product is delivered at the proper temperature, without pallet-level condition monitoring, it's difficult to confirm that the product was handled properly, its quality and remaining shelf life, or its traceability history. Growers need a solution to proactively manage harvest and processing variability to ensure delivered freshness to their customers.

The Solution

Zest Fresh is an autonomous, cloud-based post-harvest freshness management solution unlike anything else on the market today. It improves delivered quality and reduces losses due to temperature handling and processing by 50% or more by intelligently matching customer freshness requirements with actual product freshness.

Zest Fresh provides growers with the ability to proactively manage for fresh food supply chain variability. With Zest Fresh, time, temperature, location and other data is autonomously monitored for each pallet of produce from harvest to pack house to DC, providing complete visibility to the pallet's adherence to the grower's process. Zest Fresh dynamically calculates the remaining shelf life for each pallet of produce and immediately provides alerts when out of process activities impact shelf life so growers can proactively respond to maximize value and freshness.

Many factors contribute to product quality such as color, firmness, size/count and/or brix measurements. ZEST Fresh combines this data with scoring process adherence for steps such as cut-to-cool time and temperature, pre-cooling product temperature, storage and shipping to create a Zest Intelligent Pallet Routing Code (ZIPR Code) for each pallet. This ZIPR Code is then matched to pending orders to ensure each pallet has sufficient remaining freshness to meet the retailer's needs. The ZIPR Code ensures that customer shipments are loaded correctly, and that quality is tracked through actual delivery – providing the grower with visibility of delivered quality.

Zest Fresh empowers workers to keep product on process with real-time tools that reflect each process step – such as received inventory, time and temperature of product staged for pre-cool, pre-cooling, and shipping. It also drives notifications when preset process parameters are exceeded, focusing workers on the most acute problems in real-time. Data driven decisions and "manage by exception" are core Zest Fresh principles that improve efficiency and accuracy in your daily processes so that workers can easily make the right decision every time. These benefits are delivered through real-time dashboards and mobile applications. Zest Fresh is the only real-time, pallet-level freshness management solution that is automated, practical and immediately cost- effective.

Zest Fresh Solution

- Ensures compliance to grower's processes for cut-to-cool, precool and distribution

- Enables seamless matching of the retailers' freshness needs with the actual produce freshness

- Utilizes autonomous, wireless IoT sensors that don't require changes to processes or increase labor costs

- Utilizes AI and machine learning to calculate a freshness metric of the dynamic remaining shelf life for each pallet

- Can be used for most all types of fruits and vegetables

- Exception-driven management with real-time notifications sent for line and warehouse staff to initiate corrective action

- Complete track-and-trace data stored in the blockchain-enabled Zest Fresh Cloud to address food safety and recalls

- Real-time dashboards for computer and mobile applications for easy management and use

- Open APIs for integration into enterprise systems including ERP and WMS

For More Information

To learn more, please visit our website or contact us directly. We look forward to hearing from you.

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