



Vehicle & Inventory Tracking Solution at EastPack By Thomas R. Cutler

EastPack, one of the largest kiwifruit packing houses in New Zealand, has implemented an indoor vehicle and inventory tracking supply chain solution. The solution, by Sky-Trax, tracks all kiwi pallets in three facilities with forty-two refrigerated warehouses, or coolstores, and thirty forklifts.

Shipment penalties for the regulated New Zealand kiwi industry are severe, up to \$500 for a wrong pallet or wrong truck. Four pallets switched on two trucks resulted in an eight-pallet fine in excess of \$3,000. In 2007, EastPack had penalties totaling more than \$280,000.

According to Wayne Baxter, President of BaxTek Solutions, a systems integrator specializing in tracking and traceability within the food supply chain, "A successful pilot of the Sky-Trax System, accurately tracked each forklift and pallet. In combination with RFID readers, which identify the pallet, led to a full roll-out for the 2008 packing season. The result is a system which tracks the movement of all fork lift vehicles and pallets within centimeters, every second of the day in every facility."

In 2008, more than 13.5 million trays of kiwifruit were packed and shipped using the system. All forklifts are fitted with the Sky-Trax System (STS), an optically enabled real-time location system. STS determines the exact position of each vehicle using an on-board sensor that views optical position markers suspended from the warehouse ceiling. Location data is fed to a vehicle-mounted computer which continuously relays location, heading and speed to the main warehouse management system.

Baxter said, "Continuous monitoring of activities allows for full inventory reporting on the stock location, quantity, expiry date and much more, as well as analyzing the performance of indoor vehicles to ensure optimal efficiencies within the warehouse."

Erik Sunderman of GS1, a senior consultant to EastPack during the implementation program noted, "The problem was finding specific pallets in the cool stores and eliminating supply chain mistakes because a bar code solution was found to produce only 70% accuracy."

Donna Smit, EastPack Company Administrator said, "We have already moved over 2 million more trays than this time last year due to the new system. Knowing the exact location of a pallet at any given time is vital because kiwifruit is a perishable product, we have to be sure that the pallet taken by the forklift is the right one every time."

Baxter, who frequently suggests the Sky-Trax System to North American clients said, “Warehouse operational efficiencies improved dramatically because the Sky-Trax System also provides the warehouse manager with a real-time pictorial view of vehicle movements and stock locations.”

Because all activities are being monitored EastPack has realized a thirty percent (30%) increase in overall productivity, reduced the forklift fleet from twenty-four trucks to sixteen, and achieved a forty percent (40%) reduction in fruit loss for the 2008 season.

Shipment penalties were reduced from \$280,000 to just \$90,000, and penalties for noncompliance of on-time delivery were reduced from \$250,000 to zero.

Sunderman was pleased and noted, “The new system has freed up people’s time to do the things they are supposed to do instead of fire-fighting. Having ten people line up outside the manager’s door with problems of lost pallets is no longer a problem.”

Baxter said, “The system can provide information on vehicle use, stock status, and warehouse layout usage, greatly assisting in the operation of the high activity environment.”

Through Optical Position Sensors, Lift Height Sensors, and RFID Tag Reader more food quality and safety issues are accomplished through exact inventory and vehicle location in real-time as well as fewer accidents and picking errors. Baxter said, “With decreased warehouse operating costs, high value reports, statistics, and audit trails, we’re seeing food processors and warehousing operations achieve above normal return on investment on this exceptional technology.”

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