Case study

New Zealand kiwifruit



At a glance

Industry: Consumer Goods

Application: Product Compliance Labelling

Product: Intermec PM4i Smart Printers



Intermec Smart Printers provide seamless integration for new labelling requirements in New Zealand kiwifruit industry

The New Zealand kiwifruit industry is export driven, built on consistent and timely delivery of quality fresh fruit. Europe is one of the key markets for New Zealand-grown kiwi fruit, accounting for over 90 million trays of exported kiwis every year. Kiwifruit continue to be a key export for New Zealand, with kiwi exports accounting for 60.6 per cent of all fruit and nut exports and 27.3 per cent of all horticultural exports in the year to December 2007. A complex web of freight and distribution services exist to service the kiwifruit market both in New Zealand and overseas. With growth in the volume of trade and rising consumer awareness of food safety guidelines, the kiwifruit supply chain encapsulates major logistical challenges that must be met to ensure the New Zealand kiwifruit industry's competitive position in the marketplace.

As early as 2001, European customers began to focus on fresh produce logistics and traceability, requesting GS1 UCC. EAN-128 Barcode at pack levels to ensure fast and accurate tracking of inventory and other specific data in the supply chain. Labelling of kiwifruit cartons to meet GS1 requirements became a legislative imperative in 2005 when it was announced that European food safety requirements for fresh product traceability would become an import criteria. Kiwifruit operators in New Zealand needed to be able to guarantee a high level of traceability for tracking their cartons and pallets. Mandatory labelling would also protect the investment that New Zealand industry participants were making in improved quality processes.

Finding a system of speed and efficiency

New Zealand kiwifruit pack houses and cool store facilities were faced with the challenge of seamlessly integrating new labelling standards to ensure the new European food safety requirements were met.

Istari Systems Ltd, a leading New Zealand developer of supply chain management systems who specialise in the labelling and tracking of products, were well placed to research and develop a system that would ensure full traceability of fruit from orchard to final customer given their well-established reputation in supplying specialist solutions to the domestic kiwifruit industry. The requirement for unique identifiers on each kiwifruit carton label to ensure accurate traceability meant that the success of any system solution would depend on the speed at which an individual label could be requested and printed.

Istari Systems Ltd developed a system based around Intermec's PM4i thermal printer technology. The intelligent capabilities of the PM4i with its Intermec's Fingerprint programming language, in combination with the built in LCD and keypad, were an ideal hardware solution. The partnership of Intermec technology with Istari's custom software enabled labels to be printed quickly on demand. It also left no room for operator error and no requirement to pre-print label stock, preventing potential wastage.

Istari selected the Intermec PM4i, a proven "Smart Printer" that also offers integrated serial, USB and Ethernet interfaces. As a Smart Printer, the PM4i eliminates the need for a host PC, and can control peripheral devices including scanners, weight scales and other printers. The high level of integration of the Ethernet interface with the Fingerprint programming language in the PM4i gave Istari the power to implement its system vision.

The PM4i also allows remote access, enabling quick changes to label templates and operating software without the need for a site visit. At the height of the kiwifruit season, when pack houses are operating up to 3 shifts a day, this responsiveness was an invaluable tool to the Istari software solution. Istari competitors could not match or emulate this aspect of the application.



"The Istari GS1 "EAN Labelling System", based around the Intermec PM4i printer hardware, has proven to be an invaluable tool in the Kerifresh pack house operation" says Sue Willetts, Post Harvest Manager of Kerifresh Ltd. "The ease with which Istari can add custom labels and behavior are functions which are particularly valuable to our operation. We have also found the system to be reliably accurate, at speed, and that it maintains a very stable operating environment. These attributes contribute to the smooth operation of our pack house and ensure our ability to consistently meet regulatory requirements for our export fruit."

Labelling with ease

The new system from Intermec and Istari is designed to be easy and simple to use at all levels and does not require intensive training, a necessity for the New Zealand kiwifruit industry given that many on-site personnel need to use the technology at a number of different stages in the distribution process. "The solution we installed does not require intensive or high level training as it is designed in a manner that is both efficient and simple to use," says Tom Lawton, Managing Director of Istari Systems Ltd. "The system is being used in an environment where staff are often working double or even triple shifts, meaning an easy-to-use system was of the utmost importance."

Istari Systems Ltd has supplied in excess of 600 Intermec PM4i printers to the New Zealand kiwifruit industry since 2005. As the industry has become more fully aware of the flexibility and high programmability of the Intermec/Istari system it has become the solution of choice for those operators looking to replace competitors' labelling systems. "Trevelyan's Pack and Cool installed our first Istari GS1 "EAN Labeling System" in 2005," says James Trevelyan, Operations Manager at Trevelyan's Pack and Cool Ltd. "Since that time, we have installed a further 54 Intermec printers in line with pack house growth and extension. The Istari system has repeatedly proven its reliability in the fast and often difficult operating environment of the kiwifruit pack house and we value the reliability, flexibility and speed at which this solution operates."

The enhancement of the kiwifruit supply chain process has added value to New Zealand kiwifruit suppliers by meeting the European labelling requirements while simultaneously enhancing internal practices. Istari plans to utilise the knowledge gained in the kiwifruit market in other industry and manufacturing applications that require flexible, programmable printing of labels on demand and that will benefit from systems based around the unique capabilities of Intermec's thermal printer range.

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