## Manbulloo targets traceability with GS1

New system helps Australian mango supplier improve information flow through its supply chain





'whole of chain' solution has provided Manbulloo and its customers with new levels of efficiency and effectiveness.

The leading Australian mango grower-packer-marketer, which specialises in supplying the Kensington Pride variety to customer across the world, has been working closely with supply chain service provider GS1 Australia on improving the tracking of its fruit throughout the supply chain.

Manbulloo initially engaged GS1 to improve the process of information flow in its supply chain, particularly the effectiveness and efficiency of communications and business operations between Manbulloo, its ripeners and its customers.

"Our supply chain was fragmented and errors occurred during marketing as timely information was difficult to obtain, or we weren't able to share it efficiently," said Scott Ledger, quality manager at Manbulloo. Image credit: WMC Public Relations

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With each partner in the supply chain operating its own proprietary information system, Ledger said it was difficult for information, such as fruit temperature and ripeness levels, to be shared as the data was only directly available to Manbulloo.

Other members of the supply chain had to rely on Manbulloo sending the information by email or verbally by telephone, meaning the system was reliant on people being constantly available. Consequently, information was often received last minute and under pressure, resulting in errors and impacting heavily on all members in the chain.

"What we needed was a 'whole of chain' information system that could be accessed by each member of the supply chain and information shared timely and accurately," said Manbulloo chief executive Marie Piccone.

Manbulloo already had GS1 barcoding embedded in its operations, with each piece of fruit identified by a GS1 Databar label. Ledger said it made sense to expand the use of the GS1 barcodes to provide improved communications and traceability up and down the supply chain.

"The good thing was, because we used GS1, our supply chain partners didn't need to upgrade or change their technologies," he explained. "GS1 integrates with other systems including our crop management program and blockchain.

"The collective of information is available to us in real-time and allows for greater data insights. This leads to an increase and improvement in product knowledge, inventory control and product quality, all creating a better consumer experience."



Manbulloo quality manager Scott Ledger

Manbulloo strives to ensure its hand-picked mangoes are handled with care at every stage of the supply chain.

To aid in this regard, specially designed trays are used to protect its fruit during transport. The trays are also used to administer a unique identification system, which promotes high levels of communication and visibility throughout the supply chain.

A GS1 serialised barcode is printed on every tray label, allowing Manbulloo to track every piece of fruit picked at all seven of its farms and packed at its five packhouses.

Manbulloo also utilised Freshtrack FieldOp, an application developed by FreshTrack Systems to complete quality checks on mangoes in its packhouses. FreshTrack's solution collects the information and generates the GS1 barcodes for the fruit trays, which are directly uploaded to a blockchain system in real-time.

Trust Provenance and Muddy Boots Software have also been involved in the Manbulloo initiative.

Trust Provenance has provided Manbulloo with an integrity system that enables all data points in the supply chain to be securely stored and accessed via the one platform. This data is secured by distributed ledger infrastructure (blockchain) and made available to supply chain partners. Data points included food safety certificates, real-time temperature data, quality assessments and the location of shipments. These data points are all tracked using the serialised barcodes on the mango trays.

"Using GS1 standards in conjunction with other technology solutions, we can now track every carton and every batch through the

supply chain, from packing shed to retail shelf," Ledger said. "Our order rejections at the retailer's DC have reduced to very low levels. This is a major win for everyone in the supply chain as it saves an enormous amount of time and money."