Investigating alternative banana distribution channels

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Project Number: BA09034

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This report is published by Horticulture Australia Ltd to pass on information concerning horticultural research and development undertaken for the banana industry.

The research contained in this report was funded by Horticulture Australia Ltd with the financial support of the banana industry.

ISBN 0 7341 2498 8

Published and distributed by:
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Know-how for Horticulture™

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Milestone No: **190**

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1. Executive Summary

This project was aimed at finding, assessing and proving the viability of alternative distribution channels for fresh bananas into the Australian domestic market. The overriding goal was to find commercially robust ways to get bananas to consumers with a priority focus on distribution channels that service snacking occasions.

There are recent international precedents for the development of banana sales through non-grocery distribution channels. This provided some useful learning that guided the selection of local channels and the nature of the product and logistics offer required for trials. These international market developments also led to the identification of challenges driven by specific local market issues that will need to be addressed.

Based on the size and configuration of retail networks and the sales they generate for snacking products, it was determined that there was potential for the development of banana sales through Convenience store (C-store) chains and independent cafes and sandwich/milk bars.

Supply chain partners were found and trials were conducted with C-store chains and food service distributors servicing cafes/lunch bars. Parallel with these developments, leading banana wholesalers forged an alliance with 7-Eleven Australia and this retailer commenced ranging bananas.

The project outputs include the definition of potential alternative channels and challenges that will need to be resolved to make them commercially viable.

1.1 Key findings

1. Trials and pilots in developed international markets have largely progressed into the commercial trading of bananas through these new channels. These developments have been led by the larger international banana companies such as *Chiquita*, *Del Monte* and *Dole* who have partnered with the larger retail chains in these channels. This activity has provided learning of relevance to the local market.

2. The common features of the Australian alternative channels with potential to sell bananas include: sales of snacking items, lunch and food to eat in the car, combined with good levels of pedestrian traffic. Those criteria applied to this market point to C-stores and Café/Lunch bars.

3. The international market developments, particularly in the US, enjoy a retail market structure that contains several large corporate chains of C-stores and Cafes. In this market, these channels have a level of corporate ownerships but most of the stores are

independently owned. They, therefore, require a different and more resourceful consuming solution to market development and logistical servicing.

4. The apparent opportunity to exploit the volume of single bananas that are graded out of conventional fresh market cartons will depend on the location of packing facilities and the transport durability of the end product. This will also frame the extent of value capture for producers and/or wholesalers.

5. A core challenge in taking a perishable banana to these new channels is to manage the level of product waste. There are approaches that need to be balanced in finding solutions, which include investing to deliver extended shelf life and selling the product fast so that it cannot become a waste problem.

6. The platform elements to expand bananas into alternative channels include: retailer and consumer acceptance that bananas sell as singles and are worth a premium and a logistical solution that delivers smaller quantities easing the pressure that drives increased waste. Without these elements in place, selling bananas in these channels is concluded as high risk and most likely unviable.

7. A centralised logistics facility for these networks of stores allows suppliers to deliver multiple store orders to one site, after which the product can be delivered to stores daily with other perishable food products. This enables highly cost-effective leverage off an existing infrastructure and is close to a mandatory part of supply chains for this type of product. For the cafes, this is provided by the Food Service wholesaler.

8. Enhanced packaging has provided advantages in the US market expansion of single fruit sales of bananas in the US. However, these developments have been funded by the multinational banana companies for their commercial advantage and it is not clear who would lead a similar level of investment in the Australian market.

2. Project Overview

Freshlogic has been commissioned by HAL to develop alternative channels to discover, evaluate and establish alternative sales channels for distributing fresh bananas in the Australian domestic market.

This work has been developed, drawing on an understanding of both the dynamics of Convenience stores (C-stores) and the supply chain challenges of distributing a ready-to-eat fresh banana.

These considerations provide the settings for work that was done by evaluating and developing distribution channels, identifying leading options in the food marketing channels and developing a profile of the logistical mechanisms required for servicing those markets.

A number of underlying challenges and were identified in the development, which were defined as:

- This initiative requires the new channels to develop the capability to retail perishable fresh foods.

- Conceptually, there are two paths to follow for solving the challenges that this initiative presents and they potentially build different solutions.

    a. The first path involves finding ways to reduce the risk of inventory waste with ways to slow the natural deterioration. This minimises logistical service demands, holds inventory for longer periods and allows fresh fruit handling with less dependence on perishable handling skills. In the balance of this document, this is referred to as the extending shelf life (ESL) approach.
    b. The second path is to reduce inventory pressure by streamlining the logistics, reducing the handling and seeking to sell the produce so fast that inventory is not in the retail outlet long enough to deteriorate. This path has the added benefit of providing consumers with a fresher banana. In the balance of this document, this is referred to as faster turnover (FT) approach.

    The effectiveness of these two paths in the Australian market is influenced by the supply systems that predominantly flow product in the main metro markets and then determine and adjust the channel distribution volumes. This feature of the local market supply chain brings substantial pressure and risk to product that is packaged or treated for a specific channel, particularly the one in development with low volumes.

- The Australian retail market has some structural characteristics that impact this initiative. The ownership of the retail networks that appear suited to this offer, namely C-stores, Cafes/Lunch bars is largely in the hands of independent owners. This means that there are many decision points involved in accepting new products and potentially many differing logistical solutions required.

- The supply volatility of fresh bananas which can vary and with each variation can drive price changes into the retail reselling of bananas. This variation impacts in this initiative as it changes the market price relativity of the single banana offer.

- The location of banana production to the main metro markets means all bananas have to withstand a 10 – 35 hour transport trip to reach the market. This requirement brings pressure on managing transport damage and also on the durability of packaging innovations that may well suited to retailing, but conflict with transport efficiency. This transport to market requirement is a driver of eliminating single fruit pieces, because they are more prone to damage in transit and are effectively graded out at the point of packing.

- In order to capture the value required to flow back down the value chain and essentially pay for the additional action required, the bananas need to be sold as singles for a premium to the conventional retail price. Seeking a price premium for a staple product when globally consumers are in a mode of "seeking greater value" could be seen as a risky approach. However, this risk is reduced when this offer is taken into the C-stores/Café channels where all products are sold in singles, at a premium compared to their bulk price in supermarkets.

- If greater value can be captured by selling single bananas, there is strong potential for producers to increase returns as singles fruits are typically graded out of retail consignments at the pack-house level.

The objectives of the project were:

- Identifying and assessing the volume and value potential of these alternative channels by state and rank based on their potential to distribute bananas
- Exploring the value that can be added and captured by using packaging and merchandising innovations to enhance shelf life and/or lift sales levels
- Identifying the logistical solutions required to service these channels
- Establishing and running retail trials to test and confirm the logistical and store operational solutions required
- Constructing the trials so that they objectively profile the commercial viability and provide a set of operation learnings and processes that can be picked up by industry participants who are willing to invest

2.1 Project work plan

In order to meet these aims and objectives, a work plan was devised at the start of the project, whose execution required extensive and detailed research and communication activities.

1. Identified and profiled alternative distribution channels and the relative volume and value of bananas they have the potential to sell.
2. Researched the leading global examples of packing, logistics and merchandising that have been involved in the distribution and sale of bananas. In doing so, delineated local implications for this initiative.
3. Identified the leading prospects to generate incremental banana sales growth.
4. Designed supply chains and supporting operating processes. This was extended to sourcing product and developing complimentary retail merchandising fixtures and information bulletins to convey to the various stakeholders about what was on offer and what was requested from them.
5. Identified and secured commercial chain partners that included producer, wholesaler/ripener, logistics provider and retailer. In at least one instance, this involved finding and introducing different enterprises as their combinations made the required supply function.
6. Operated two retail trials to test and validate that the supply chains work.
7. Documented the trial learnings, in order to convey key learnings to the balance of the banana industry, so that they can undertake similar initiatives with like channels.
8. Conducted a range of communication activities to inform about the project's progress and conveyed the requirements and intentions to those involved in trials.

3. Existing practices and innovations

The selling of single bananas is an initiative that has been developed in several developed markets and therefore, has clear potential to provide learnings that could be applied locally.

To discover and assess these learnings, all available information was consolidated, assessed and summarised in the balance of section 2. The main components of this summary are:

- Summary findings
- Packaging enhancements
- International market precedents
- Fruit vending machine options

3.1 Summary findings from existing practices & innovations

Issue	Learnings from International Companies
Logistics	• These multinational companies have significant depth within their logistical resources, with well-established distribution networks on a national scale offering them with ideal conditions to provide solutions to these alternative channels. • The stock pressure that can translate into waste has also been eased by reducing the stock unit to smaller order multiples. This is a platform element for this type of offer. • Centralised buying decisions that provide access to 1000s of retail stores have been an enabler. This provides market development efficiencies that in turn have allowed marketing support to be confidently invested. • Improvement packaging technology has been a crucial enabler to the development of key distribution solutions.
Product shelf Life extension	• Product shelf life can and has been enhanced with packaging solutions. The highest volume success has been the “Chiquita to go” option, where banana shelf life is enhanced through a dynamic MAP liner that has the capacity to regulate the mix of gases that affect ripeness.
Fresh food handling skill levels	• The development agendas of *Chiquita* and *Del Monte* reflect consideration and investment in raising warehouse and retail skills levels to support the sale of fresh bananas. This indicates that these developments assessed these skills level as something that could and needed to be influenced. It is expected that the success of such an investment will be influenced by the stability of the employee base. • The depth of skill required is directly influenced by the extent to which the product, packaging and logistics solutions have

	eliminated human handling.
Income and costs Impacts	• An overriding factor on costs is the extent of additional cost this offer can stand. This has been set by the selling proposition that moves to selling bananas by the each and with that captures a retail premium of 140-150%. This is a platform element that provides the scope for value-added tasks in the supply chain handling of these products. • Product cost pressures will be impacted by labour intensity and scope for automation. Given the sensitive nature of the product, most of the repacking and processing is being done closer to the end market and as such is incurring higher labour cost. All indications are that this cost level is sustainable. • Within the packaging options, it will cost more to individually wrap banana as compared to providing enhanced shelf life through a MAP carton solution. • Logistical costs are driven by service levels and frequency of delivery. It appears that most of the major developers are seeking to flow product through central distribution facilities. This then allows stores to order stock as frequently as daily, as it can come with other fresh/perishable product. • Handling cost impacts at retail are dominated by incurring waste in the form of unsalable stock. The cost of this is noticeably absent from the available reviews of the leading international developments.
Suitability to Australian retail	• The concept of selling single bananas has been introduced and proven viable. However, it should be noted that international markets where this offer has been expanded have a far more stable banana retail price per kg than the Australian market. It is far easier to add value to new product forms than the existing product forms, providing a more stable value. In essence, if the retail price of Australian bananas lifts or drops sharply, as it is prone to do, then this will impact the value relativity of the single sell option. If this flows into sharp variations in demand, it will impact the logistics and potentially, the product quality. This is a variable that the international markets did not have to manage. • The application of these learnings from logistics confirm that the store order multiple needs to be smaller to ease stock pressure. • Packaging enhancements have scope for value adding but this will be impacted by where they are applied and the transport durability of the resulting product form. The location of packaging enhancements will also frame whether the resource

	of single bananas at the pack house level can be exploited.

3.2 Packaging Enhancements

3.2.1 Packaging overview and dynamics

Packing enhancements were explored because packaging has been used to enhance shelf life in the development of alternative channels in several international markets. This is covered in more detail in this document within the section on International market precedents.

There is value in understanding what the packaging is seeking to impact and this is best framed by starting with the physiology of bananas and what can be influenced to enhance shelf life.

Bananas are part of a group of fruits called “Climacteric fruits”. Climacteric fruits are those that can be harvested green and later ripened, separate from the mother plant. Most climacteric fruits generate internally a product called ethylene. This product is a natural result of the aging of the fruit and in turn is responsible for creating the conditions for the product to ripen. The production and sensitivity to ethylene are directly related to the temperature and to the amount of oxygen available. These are the key dynamics that packaging solutions need to influence and this extends out to the three variables that are adjusted to extend banana shelf life. They are typically managed in conjunction with packaging solutions and include:

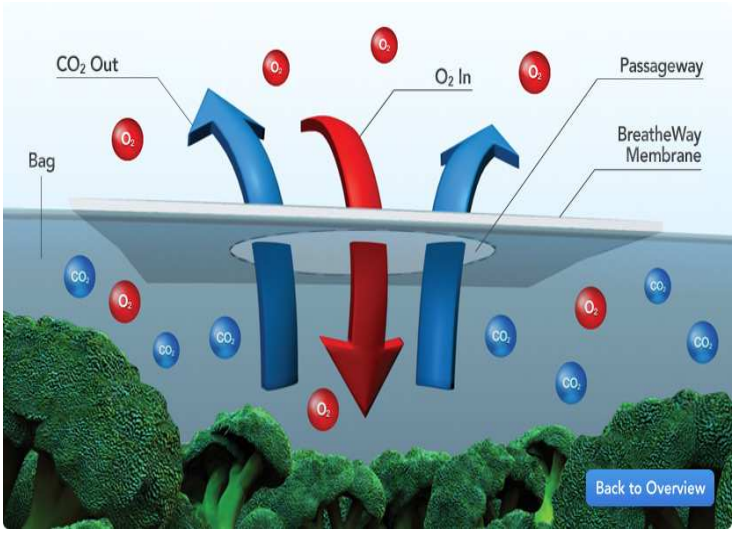
1. **Minimizing temperature:** This is the most common method. Keeping bananas at 14°C will extend shelf life. Further, reducing the temperature will produce bananas that will have a greyish tint to the colour. This is called “chilling injury” and happens when bananas are exposed to low temperatures. This why you cannot put bananas in the refrigerator. Bananas held at 14°C will last 5 to 6 days from colour 4 to colour 7. Bananas held at 22°C will last 3 to 4 days from colour 4 to colour 7.

2. **Minimizing sensitivity to Ethylene:** This method consists of applying an artificial gas to the fruit during ripening. This gas known as 1-MCP blocks the fruit’s sensitivity to ethylene to slow down the ripening process. This method is only effective at low dosages and results in an increase of 1 to 2 days over conventionally ripened bananas stored at 22°C. Bananas treated with this gas will show chilling injury at higher temperatures, uneven ripening and more dehydration (neck shrinkage) than conventionally ripened bananas.

3. **Introducing packaging:** This introduces a localized controlled environment around the product or a quantity of products, which is designed to influence the exchange and availability of oxygen (O2), carbon dioxide (CO2) and ethylene and restrict exposure to moisture and physical handing damage. There are three main types of packaging.

3.2.2 Modified Atmosphere Packaging (MAP)

The purpose of Modified Atmosphere Packaging (MAP) is to reduce the amount of oxygen available. For these packs to be effective, the oxygen level inside the pack has to be reduced to less than 8%. It is possible to achieve these low levels by allowing the fruit to consume the air present inside a bag that has some method to control the amount of new oxygen coming in from the outside. Bananas are sensitive to carbon dioxide levels higher than 10%; therefore, for these packs to be effective, they have to also eliminate the CO2 building up inside the pack.



There are two types of Modified Atmosphere technologies

- **Static:** Mostly accomplished with Microperforated films. These packs have a fixed ability to exchange gases and have to be designed for one temperature, as at higher temperatures, it will produce too high CO2 and at low temperatures, it will result in too high O2. Examples of these types are Perftech, Stepac Extend and AMCOR P-Plus. They can extend shelf life 2 to 3 days at 22°C. Microperforated films will work if: (1) the fruit does not change respiration rate, but bananas do quite a bit or (2) the product temperature is kept constant from the point of packing in micro-perf to the time it is opened.

- **Dynamic:** These rely on a special material applied to the pack that has the property to adjust permeability with temperature. These packs can hold the right atmospheres over a wider range of temperatures and therefore over a longer period of time during the supply chain from the shipper to the store. An example of this approach is the Landec Intelimer Membrane, also known as the "BreatheWay®", and is used by APIO Inc. *Chiquita* has the exclusive rights to this technology for bananas.

MAP delivers an effective method for extending the shelf life of fresh and minimally processed produce, making it ideal for long haul transport, exporters, the hospitality trade and retail packaging. The dynamic MAP with the capacity to adjust to the changing temperatures that are likely to be experienced in a banana supply chain makes this a strong option.

MAP for the packaging of fresh fruit and vegetables differs markedly from that designed for meat, fish, poultry and bakery goods in that it needs to accommodate produce that is still "alive" and respiring. It uses a combination of packaging processing that typically seals the product in a contained space and fills that space with a prescribed combination of the common gases of O2, CO2 and nitrogen (N2). Fruit & Veg recommended gas mix: 3-8% CO_2: 2-5% O_2: 87-95% N_2. The films typically used in the produce industry are selectively breathable films that offer high clarity, good sealing, and anti-fog properties.

The benefits of MAP packaging for fruit include:

- Extending shelf life from 25 – 400%
- Reducing respiration
- Delaying ripening
- Decreasing ethylene production and sensitivity
- Retarding textural softening
- Reducing chlorophyll degradation

MAP packaging solutions are used in combination with external temperature management as these variables can impact the respiratory behaviour of product inside the contained MAP package. Without being able to control these variables through the handling stages of a MAP-packaged product, the benefits are unlikely to be assured.

The value adding potential of MAP packaging is directly impacted by the suitability of the pack size, as when the pack is opened, it is effectively fresh product that cannot be returned to the more stable MAP holding conditions. If the pack size is too large then the owner will be left with an excess fresh stock and incur the cost of waste and if the pack is too small, then the added costs of the MAP packaging can escalate to be unviable.

This type of packaging is an option to provide an element of stability rigidity to the banana supply chain while providing the means to increase shelf life and limit waste at the point of sale. The multinational fruit company *Chiquita* adopted a variant of MAP packaging when it began trials in 2006 to develop the sales of single bananas through C-stores and Cafes for the North American market.

MAP provides an appropriate platform for packaging of fresh fruit as it can be customized to suit the exact needs of the produce and handling conditions.

3.2.3 Active Intelligence Packaging

Active packaging technologies include materials that absorb shelf life-reducing gases such as O2 or ethylene in fruit, and the last couple of years have seen increasing numbers of packs using vapour-release mechanisms for antimicrobials. Active packaging incorporates additives into the

packaging film or within the package containers, which in turn maintains food quality and extends product shelf life.
Examples include:

- Oxygen scavengers
- Carbon dioxide scavengers/emitters
- Ethylene scavengers (suppresses produce respiration)
- Ethanol emitters (may be used as an antimicrobial agent)
- Preservative releasers
- Moisture absorbers
- Flavor/odor absorbers (to remove undesirable flavors and taints)

Del Monte, another large multinational fruit company, began trials in 2009 to launch its single banana range within 7-Eleven in North American. To provide the best quality fruit to this channel, *Del Monte* decided to utilize the capabilities of Landec Corp, a developer and marketer of technology-based polymer products for food. After two years of evaluating the packaging technology for bananas, they concluded that the best option for shelf life extension would be packaging that is consistent with the Active Intelligence properties.

Active Intelligence packaging provides one significant barrier as it incurs significant costs to integrate this technology into a packaging solution. In spite of this fact, major advancements have been made in this form of packaging in past decade and as this development furthers, costing pressures may be alleviated, providing a more affordable platform for future development.

3.2.4 Edible/Biodegradable Films and Coatings

Edible

An edible film is defined as a thin layer of edible material applied on a food as a coating or placed on/or between food components.

One of the most useful functions of edible films is their ability to act as barriers, either to gas, oil, or more often water. Moisture levels in foods are critical for maintaining freshness, controlling microbial growth, and providing mouthfeel and texture. Edible films can control water activity preventing either moisture loss or uptake.

The main functions of this packaging option are:

- Offering a selective barrier to retard migration of moisture
- Retarding gas (O2, CO2) transport
- Improving mechanical handling properties of foods
- Improving mechanical integrity or handling characteristics of the food
- Inhibiting processing related colour changes
- Inhibiting dehydration of fresh fruit segments
- Controlling of chilling injury and texture degradation

Non Edible/Biodegradable

Non-edible, polymeric materials available for biodegradable polymer films include certain cellulose-based products (e.g., cellophane), microbial polyesters (e.g., polyhydroxybutyrate /valerate co-polymers produced by bacteria), biodegradable synthetic polymers (e.g., polylactic acid produced from fermentation lactic acid) and combinations of starch with biodegradable synthetic polymers (e.g., polyvinyl alcohol). Natural polymers or polymers derived from natural monomers offer the greatest opportunities, since their biodegradability and environmental compatibility are assured. Edible polymer film materials are also acceptable for biodegradable polymer films.

The challenge for the successful use of biodegradable polymer products is achieving controlled lifetime. Products must remain stable and function properly during storage and intended use, but biodegrade efficiently later. This means avoiding environmental conditions conducive to biodegradation at the intended time. Only by appropriately controlling water activity, pH, nutrients, temperature, oxygen levels, and time can package integrity and microbial stability be assured. Thus, biodegradable polymer films may be safely stored in dry environments and used with dry food products over a relatively long period of time, whereas acceptable time of storage in moist environments or time of use with moist foods would be limited.

These films are not meant to, nor could they ever replace synthetic packaging materials for prolonged storage of foods. The utility of edible films lies in their capacity to act as an adjunct for improving overall food quality, extending shelf life and improving economic efficiency of packaging materials.

While these options appear attractive to a fruit like bananas where the skin in not consumed there are unanswered questions around whether this would affect the ripening process and thus, the overall quality of the fruit.

3.3 International market precedents

3.3.1 Chiquita to go

Product Solutions

- The bananas are packed as singles into a 10 lb size box, with each box contains between 16 and 22 bananas.
- Single banana weights range from 200g to 285g and are therefore of a larger size.
- Each box is covered and sealed by a Breatheway packaging film fitted with a membrane window that provides the capacity to control the contained atmosphere.
- The promised retail display life is an optimistic 2-3 days.

- Retailers can sell single "Chiquita to Go" bananas for US75c each, compared with $US1.50 a kg or US25-30c per banana in the grocery store. This represents a 140-150% premium.
- In early 2006, trials began in 200 C-stores and have now expanded to 7,500 retail locations in Nth America selling the single banana, including the Starbucks chain of cafes.
- *Chiquita* has led the market development with consumer research claims that as many as 42% of consumers would eat more bananas if they were available in more locations. They have also released results of tests conducted around the US, including Starbucks shops in the Midwest, showed that by making bananas more readily available to consumers, it did not cannibalize *Chiquita*'s sales at supermarkets.

Logistics

- Handling requirements are complicated and sensitive and need to be handled with care or waste will be incurred.
- Handling procedures advise to “handle like eggs”.
- Temperature control throughout the supply chain plays an integral role in gaining the full benefits from the permeable film that gives the packaging its shelf life advantages.

- The breathing window of the packaging innovation needs to be protected and the cartons can only be stacked with the window facing upwards.
- Includes a system of carton/pallet level handling requirement involving insulated blanket covers and insulated outer cartons, which all indicate the temperature sensitivity of the packaging system.
- Questionably procedural recommendations to remove discoloured fruit, which was 50% of the retail display.

- Retail merchandising units with questionable space efficiency are provided. It is assessed that they will be challenged to get and keep the prime counter selling space and compete with the income per metre generated from the likes of shelf stable confectionary.

- Yet, undoubtedly, the product is enjoying support as a “healthy good guy” vs. other counter merchandise.
- Levering off the retail market structure in the US where the C-stores and large Cafe chains (Starbucks) provide central buying decisions for many 1000s of retail outlets.

PackagingBreatheWay® (MAP)

- Extends the shelf life of the produce by managing the amount of O2 and CO2 contained within the packaging. This includes setting a prescribed mix of O2 & CO2 in each carton before it is sealed and despatched.

- This BreatheWay membrane solution manages all gas transfer requirements for the package, allowing the flexibility to meet the specific modified atmosphere requirements for a wide range of products, as well as temperature changes during shipping or merchandising movements throughout the supply chain, being more permeable at high temperatures and less at lower temperatures.
- The membrane is a window in the separate top seal of the carton inner liner and interfaces with the outside environment, through a gap on the top of each 10 lb *Chiquita* box.
- This window also allows the fruit to be viewed for quality throughout the supply chain.
- *Chiquita* has the exclusive rights to this technology for bananas.

Project implications

- Distribution channel focus clearly on C-stores and Cafes.
- Expansion to 10,000 store locations, both in the US and UK/Europe confirms that the offer can work.
- US75c for a single *Chiquita* banana, while conventional retail value per banana is roughly US31c, confirms the acceptance of a market premium for single bananas.
- MAP technology found to be best suited to handle the supply chain transitions while also extending the shelf life of the banana.

3.3.2 Del Monte

Product Solutions

- *Del Monte* provides a singly packaged banana. This packaging provides permeable qualities that allow the fruit to offer an increased shelf life while also incorporating product branding and point of sale aids such as bar codes.
- Main distribution channel targets are convenience, foodservice, catering and vending channels.
- Offer a number retail options with a 40-pound (18kg) bulk box, a 40 pound quad-pack (4 x 10 pound boxes) and a 10-pound (4.54kg) display-ready box.
- Trialling in 27 Dallas 7-eleven stores since October 2009. Stage 2 included a further 120 stores in Florida and Southern California. If the results are positive, 7-eleven are reported to be undertaking the roll out stages of *Del Monte* singly wrapped bananas throughout its 5,787 stores in 2010.

Packaging

- Individually wrapped bananas.
- "Controlled Ripening technology" (CRT) or Active Intelligence Packaging.
- Each banana offers a bar code for easy check out identification.

- Reduces bruising, controls ripening and extends shelf life up to five days.
- The *Del Monte* bananas are available in a 40-pound bulk box, a 40 pound quad-pack and a 10-pound display-ready box. The company also offers a stand-up counter display as per the adjacent picture.

Project implications

- One product form for retail and vending distribution channels.
- Reflects an apparent consumer acceptance of packaging on a banana.

3.3.3 Dole

Product solutions

"Take One Pack"- The Take-One Pack is a 10 pound (4.54kg) box containing 28 to 32 fingers, with bananas ranging in size 8.5" to 9.5" in size. This is the pack that is serving those selling banana as singles.

"Single 150"- This pack contains 150 pre-washed, pre-trimmed petite banana fingers that are ready to serve, with a banana ranging in size from 7" to 8" to ensure equal proportion.

"Quad Pack"- Each Quad Pack box contains four 10 pound (4.54kg) boxes within a master case. The bananas within the Quad Pack are 8" to 10" in size.

"Singlet Pack"- Singlet Pack Banana box contains eight 5 lb (2.3kg) boxes within a master case, with bananas ranging from 8" to 10" in size. This pack offers a much larger banana than the previous options.

- All pack options provide singles that are sold at a fixed pre-determined price to elevate pricing issues at retail points that do not have strong familiarity with fresh produce and provide consistency to the consumer.

Packaging

- The adjacent picture is of *Dole*'s chosen packaging option which is consistent through all product options that were mentioned above.
- *Dole*'s proprietary packaging was developed with Perftech, and claims to extend the shelf life of bananas fully ripened to colour stage 3.0 to 3.5, by three to four days.
- Perftech is consistent with MAP packaging capabilities, by specially designed micro-perforations allowing for control the ripening process, reduce spoilage and extend peak freshness.

- Perftech employs a process to make precision holes in plastic packaging in a specifically designed pattern
- Bananas are packed in the Perftech bags in the Tropics, which would utilize the least cost labour option and
- These bananas can be ripened like conventionally packed bananas.
- Modified atmospheres are generated through the natural process of the respiration of the enclosed banana, thus leading to reducing O2 concentration and increasing CO2 concentrations within the package.

Project implications

- Packaging process is undertaken at the pack house and not further down the chain.

3.4 Local Market Precedents

3.4.1 Sweeter Bananas – Western Australia

Product Solutions

- Based out of Carnarvon, Western Australia (WA).
- The banana is generally smaller and sweeter than Queensland produce due to the arid nature of the production systems, giving the product a level of differentiation that has been welcomed by consumers.
- Key point of this product is aimed at providing the consumer with a smaller banana that easily fits the needs of the on–the-go customer. Developed in response to a perceived demand for this type of “on the go” product that is also suitable to fit into school lunchboxes.
- Main channels are major supermarket and greengrocer/market retailers within WA.
- **Packaging Type:** PET4 plastic bags with breather holes to prevent condensation build-up.
- **Packaging Units:** 750g & 1kg Pre packs. The majority of the pack will be made up of a cluster with some singles to make up weight (no more than 2-3 singles per pack).
- The bag serves a dual purpose - to give brand identity and to give greater protection to the sensitive skins of bananas from being marked throughout the supply chain.

Project Implications

- Demonstrates a low cost and effective model that allows *Sweeter Bananas* to differentiate their product, improved yield while also improving the longevity of their bananas.
- The product still receives some transport rub, but overall the level of wastage has been improved considerably by this form of low cost packaging.
- Sold on a per kg basis.

3.4.2 Pacific Coast Eco Bananas

Product Solution

- Based out Innisfail, North Queensland.
- Promotes an environmentally friendly production system through implementation of Environmental Management System based on the standards of ISO14000.
- Product is sold through a number or large retailers and selected fruiters in all States.

Packaging

- Packed in punnets to a net weight of 800 grams, with each punnet contains 7 Bananas.
- Packed in cartons of 12.
- Have developed a mechanized packing process to reduce dependence and cost of packing labour.
- Packed on farm and therefore, capture the resource of single bananas that may be rejected from standard carton specifications.
- Packaging solution provides a differentiation for the product and a mechanism to convey brand messages and environmental credentials.
- Can be ripened in the punnet.
- Designed to protect against transport rub and eliminate human handling, and thereby limiting the wastage at retail.
- Also fits into a developed retail merchandising fixture with an efficient retail footprint, as profiled in appendix C.
- Delivers normal banana shelf life.
- Has an established state-based network of wholesale distributors.

Project Implications

- Offers a solution well-suited to retailing in low-volume channels.
- Captures higher yield for the producer, as banana singles on farm can be used.
- With minimal development, it can function as an order multiple and a merchandising unit for channels seeking to sell single bananas.
- Has an established level of consumer demand.
- It was selected and used as a supply chain partner in this project.

3.5 Fresh Fruit Vending Machines

3.5.1 Overview

Some banana producers and distributors have extended their influence further down the supply chain to retailing bananas through vending machines.

There are mainstream food and beverage precedents for this type of direct offer, particularly with beverages and snack food where the vending machines are used widely. These machines are located adjacent to power which gives the means to provide refrigeration and therefore, includes the communication capacity to place reorders when stock levels reach predetermined trigger points.

These vending options are also viewed as a communications mechanism, similar to an outdoor poster. This can lead to exposure which can be credited into the operation of the vending machine. Clearly this is an opportunity more suited to those who manage consumer brands.

While this model provides access to the retail margin, it also requires a high level of capital expenditure. Most importantly, it requires a servicing infrastructure and either high unit volume and/or alignment with other fruit or similar types of products to capture economies of scale.

When bananas are offered in vending machines, the fruit will require either piece level packaging to maintain shelf life or a vending unit with the capacity to control the environment that holds the fruit to maintain its condition.

Examples of where vending machines have offered fresh fruit include the following:

3.5.2 Del Monte vending in the US

Fresh Del Monte Produce has unveiled a line of fresh and fresh-cut fruits and vegetables specifically designed to work in refrigerated vending machines in the US mid-Atlantic and south-east regions.

Del Monte has stated that this product range has been developed to meet demand healthy snack options and clearly *Del Monte* is testing the viability of being a vending retailer.

The range includes bananas, pineapples, grapes, apple slices, baby carrots, celery and tomatoes, with each item containing less than 120 calories each. Some options are also paired with light dips and prices range from US$1 to US$2.25 per unit.

Fresh Del Monte has developed a proprietary banana packaging to maintain colour and slow ripening. The packaging is claimed to provide a total of five days of shelf life when kept between 13.9 and 15.5 degrees Celsius.

Del Monte is testing this offer line at health clubs, schools, institutions and office facilities in Illinois and South Florida.

3.5.3 Dole Vending in Japan

Dole has announced that it is going to start selling bananas through vending machines in Japan. Keeping the fruit at the ideal temperature of 13 degrees Celsius, the pre-pack bananas will be selling for US$1.50 for an individual banana or US$4.50 for a bunch (five or six) bananas. *Dole* put the country's first banana vending machine at an underground shopping mall in Shibuya.

This vending machine, which was installed in July 2010, can hold 100 packages of bananas. More than 1,000 pieces were sold in the first week the machine was set up. The distributor is reloading the machine every Monday, Wednesday and Friday.

The high productivity of this unit is influence by the high exposure of vending machines in Japan, where there is approximately one vending machine per every twenty-three people. This is an accepted way of buying a diverse array of product including food. This level of productivity is highly likely to see an expanded network of vending machines.

3.5.3 RP Vending Machines/Yarra Valley fruit growers - Australia

RP Vending was motivated by rising awareness of healthy eating and launched a new "Schools Go Fresh" service. After a year of trials, state-of-the-art fresh food vending machines are now in selected schools across Victoria, stocking a variety of individually packed fruit and vegetable snacks.

Schools Go Fresh is a joint venture between RP Vending Machines and a consortium of Yarra Valley fruit growers. It is being expanded through a franchise model and is now providing a range of machines with an internal temperature of 3 degrees Celsius so that it can contain a selection of products, including sandwiches, dairy products, ready meals, fruit and the usual confectionary.

Fruit vending machines, while popular overseas, are rare in Australia.

The initial appeal was driven by the machine's novelty appeal. Swanky, Italian-designed machines that operate according to a cashless system of "swipe tags", they feature a revolving drum that allows fussy eaters to turn the fruit until they see precisely which product they would like to eat. The tech-savvy purchasing "tags" function a bit like CityLink passes, allowing parents to select the fruit they want their child to eat via an online account, set a daily spending limit and view their child's transaction history.

Then the appeal of the fruit, which supplied directly from the growers, stored at a crisp 3 degrees, and with only a brief warehouse stop between farm and school, was far fresher than the produce many students were used to.

This vending option does not currently range bananas and until the temperature holding range is increased, they are unlikely to do so.

Project implications

- Vending of fresh food in this market is new compared to other developed markets. However, as vending of other snack foods and beverages has some penetration, there is a platform for expansion.
- Given that most of the food and beverages vended in Australia is either refrigerated at chilled levels and/or held at ambient temperatures, the inclusion of bananas in a vending option would require a banana-specific unit. This seems an unlikely market development in the short term.

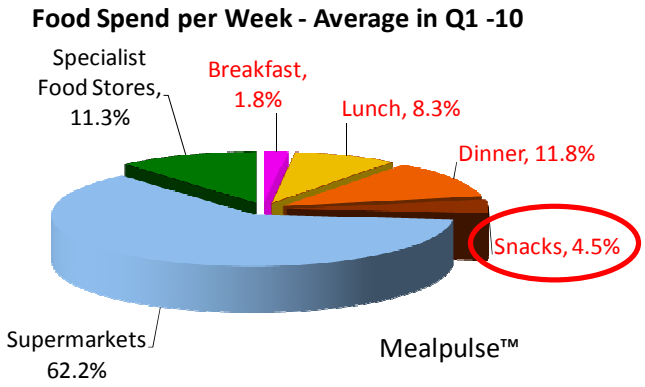
4. Market Potential

This section summarises the assessment of market potential for banana sales through alternate or non-grocery retail channels in the Australian market. This potential has been framed by drawing on the international precedents and knowledge of the local market channel structure and capabilities.

4.1 C-Stores

The Mealpulse™ consumer panel, which is the largest food specific research panel in Australia, gathers responses from 15,000 consumers per year. These responses indicate that the average household will spend 62.2% of their food spend in supermarkets and 11.3% in specialist food stores like greengrocers, butchers and delis. The average household also spent 26.5% of their food spend on eating away from home of which 4.5% was on snacks.

1 b



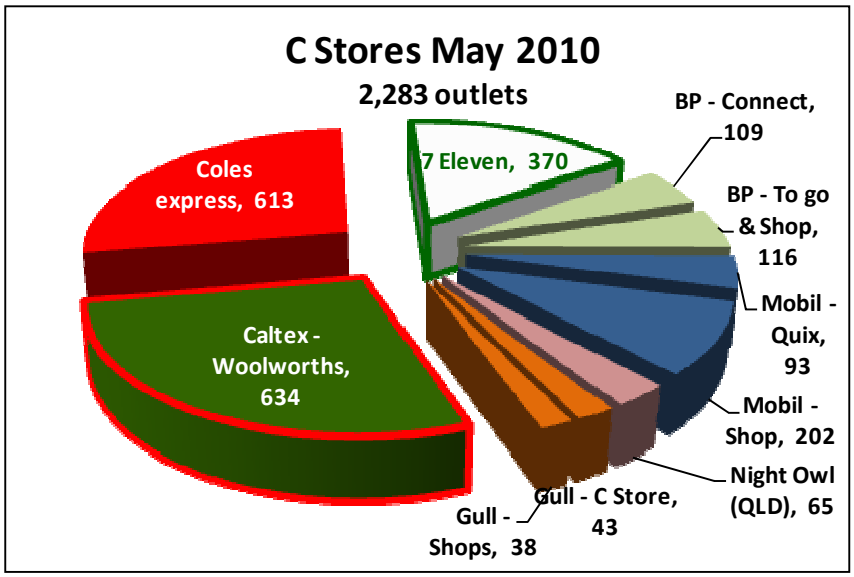
When this 4.5% of the average total weekly food spend of $223 is extended by the occupied households, it equates to an annual market value of $4.2 billion and this is the snack market that single serve bananas will seek to penetrate. Based on the fact that the C-stores are identified by Mealpulse™ panel respondents as the provider of these snacks, they are estimated to capture 90% of these purchases or a value of $3.78b.

A **C-store** can be identified on the following grounds:

- **Retail offer:** A comparatively broad range of items for the size of store, leading with confectionary/snacks, soft drinks, newsagency, tobacco, top-up items like milk and bread, selected groceries, lottery, phone cards, and some ready-to-eat food like fresh sandwiches, hot dogs, and coffee.
- **Capability:** Although these stores provide snacks on-the-go and do have some experience in foodservice, they are not strong on fresh food retailing, often lacking the capabilities and scale to stock and merchandise fresh-food products.
- **Trading hours**: Convenience stores are open 24 hours for 7 days a week.
- **Format/structure:** They are in retail formats of 150-200 square metres in size. The product range (except tobacco) is typically displayed in a self-select format and sales are processed over counter.
- **Location:** They are typically located on/or adjacent to high traffic roads, densely populated urban neighbourhoods, or near any transportation hubs and are orientated to draw motorised transport and/or pedestrian traffic into the site.

- **Price for convenience:** Due to the convenience of longer shopping hours, variety of products, and convenient location of these stores, the retail prices in a C-store store are higher than at a supermarket. Consumers are aware of this variation.
- **Various types exist:** Different types of C-stores exist. These variations are primarily driven by the stores aligned with the major supermarkets, stores annexed to fuel and those that are stand alone. The most recent growth in C-store outlets has been in locations without fuel as the network of sites offering fuel continues to be rationalised.

There are a total of 2,283 C-stores in the Australian market as is profiled in the chart below. This project has targeted two types of C-stores that are deemed to have the capacity to sell fresh bananas. The number of available stores is arrived at by eliminating the 1,247 stores operated by Coles (Shell) & WW (Caltex) and also eliminating the 240 stores that are operated



Mobil shops and Gull Shops, as they are not considered to have capacity to retail bananas. This leaves a total of 796 stores and with a 75% penetration, this equates to 597 stores.

These C-stores are estimated to have the potential to sell 10-20kg of bananas at 0.99 cents per week, generating sales values at $1.7 to $3.5m annually or 300-600 tonnes and 1.7 to 3.5m bananas per annum.

The offer of the C-stores, in which the greatest influence is the inclusion or exclusion of fuel, also impacts their retailing priorities and potential to successfully range a product like fresh bananas.

C-stores without fuel, which make up a small but increasing 10% of the targeted 597 C-stores, are solely focused on retail convenience. As they already stock some perishable goods in the form of dairy, bakery products and have a credible lunch offer, they understand the issues related to effectively handling a daily intake of fresh produce. At present, most of the sales in these stores are generated from snack foods but there are several initiatives in place to freshen

their offer and lift their food credibility. Fresh bananas are a welcome product offer that compliments what these stores are attempting to do to win consumer support.

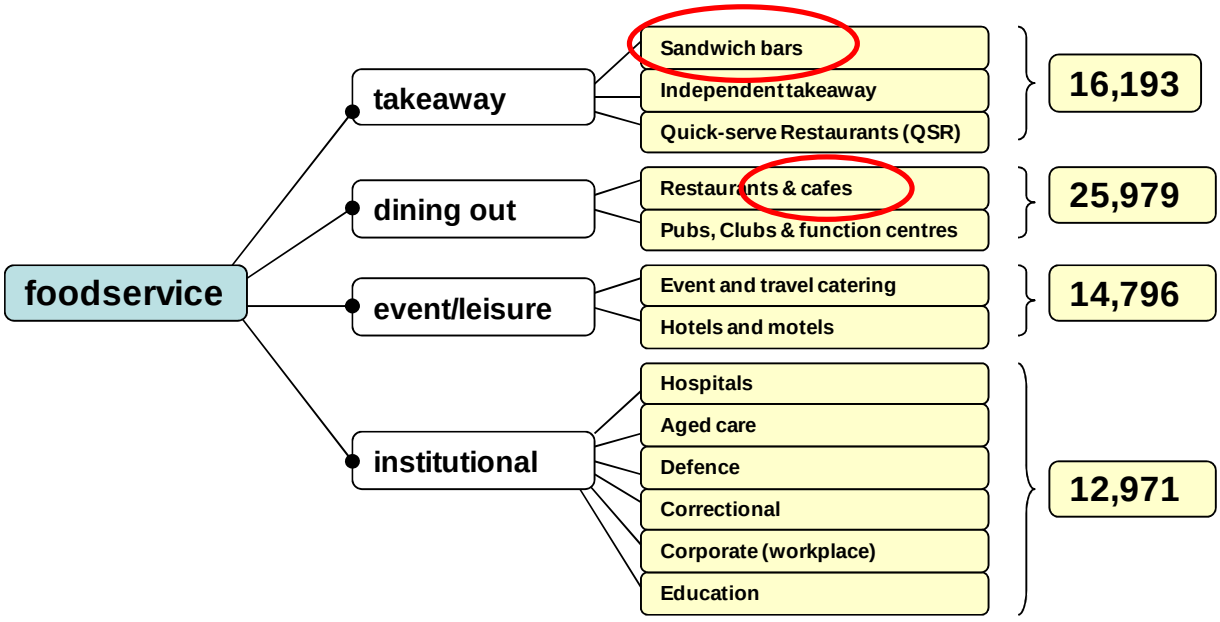
It is recognised that this type of C-Store will have more locations in the inner city to service the increasing number residents in these location. C-stores in general will also be more productive in Queensland and Western Australia, because the general retail shopping hours are more constrained in these states.

Branded C-stores with fuel make up 90% of the targeted stores and based on fuel purchased alone these stores all enjoy steady levels of pedestrian traffic. This provides an opportunity to sell other merchandise when these customers are paying for their fuel. However, it can limit what is possible as these customers are typically rushed and usually only exposed to merchandise around the point of payment.

The larger C-stores of this type carry a full retail offer as they typically service a mixture of fuel and shop customers. However, the small- to medium-sized stores struggle at times to do more than trying to sell snack food and confectionary to customers who are buying fuel. This type of wavering commitment can be an unstable influence on success in retailing a perishable product like bananas.

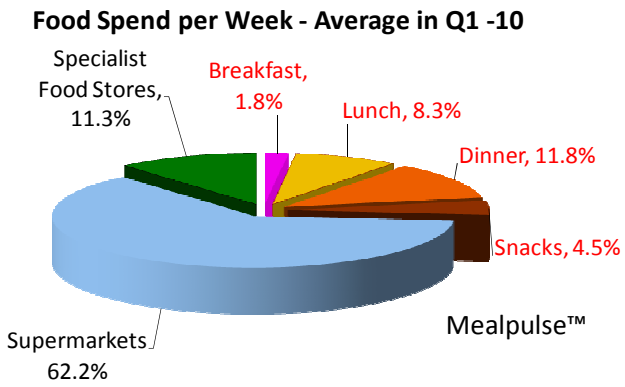
4.2 Food service - Café/Lunch Bars

This channel is part of the food service channel and provides food and beverage consumers eat away from home. The diagram below profiles where these channels fit within the food service and the number of existing outlets.



Café/Lunch Bars were identified as an opportunity for this project as they already have capabilities in handling fresh produce. There are 9,000 of this type of outlets across Australia their potential is driven by the scope to sell a banana to a buyer of lunch or as a snack.

1b



The value of this channel is again quantified by drawing on the Mealpulse™ panel responses that frame household food spend. In this instance, the value of spend in the Café/Lunch bar channels is framed by the 10.1% of food expenditure on breakfast and lunch. This extends to an annual market value of $9.37b.

Cafe/Lunch bars can be defined on the following grounds:

- **Retail offer:** They service breakfast, morning coffee, and weekday lunch day-part with an offer that includes "make-to-order" fresh sandwiches that are taken eaten on premises but largely taken offsite for consumption.
- **Capability**: They are experienced in handling perishable food.
- **Trading hours:** Cafe/lunch bars are usually open from 6.30 am to mid-afternoon on weekdays. Some locations stay open for dinner but unless they have they have the scale to operate two staffing structures this does not work well.
- **Format/structure:** They are usually about 50 to 100 square meters of retail space in size.
- **Location:** Cafe/lunch bars are located in densely populated catchments of commercial enterprises.

When a selection criterion based on scale and scope for servicing is considered, a conservative 10% penetration is assumed. Therefore, there are 900 suitable outlets of this type across Australia.

It is estimated that this top tier of Cafe/lunch bars have the potential to sell 15-25kg of bananas at 0.99 cents each per week. If achieved, this would generate sales of up to $4.0 to $6.6m by selling 700 to 1,100 tonnes or 4 to 6.6m bananas annually.

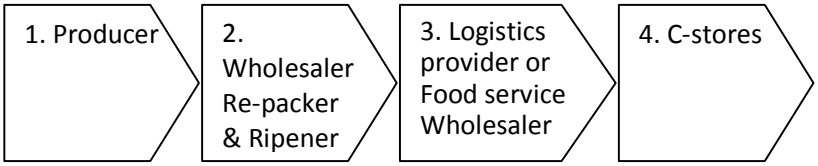
5. Market development and trials

5.1 Overview

The task was to design an offer of single bananas that can be handled from production, ripening, wholesaling, and distribution to retail/foodservice and then display to consumers. This also called for the identification and alignment of supply chain partners.

The target channels are C-stores, and Cafe/Lunch bars, which have been assessed to have the potential for incremental banana sales in the Australian domestic market.

The supply chains required were similar for each targeted channel. The only difference being the role at #3 which varies from a logistics provider to service C-stores to a Food Service Wholesaler to service Cafe/Lunch bars. This is profiled below.



5.2 C-Stores

7-Eleven

7-Eleven are the third largest C-store retailer in Australia behind the Coles (Shell) and Woolworth (Caltex) networks. As they only operate as a C-store, they are the largest specialist C-store operator in Australia. They currently operate 370 sites and in recent developments they are expected to gain regulatory approval to acquire a further 295 sites from Mobil. If these stores are integrated into the 7-Eleven business, they will be the largest C-store network in Australia.

7-Eleven were contacted in the course of the project and it was ascertained they had already commenced a pilot in partnership with a wholesale agent along the east coast. This model involves:

- Repacking of bananas in the east coast metro markets into a perforated plastic pack of 5-6 single bananas, which becomes the order multiple for the retail stores.
- Collation of the combined store orders from 7-Eleven making this available to the wholesaler supplier of bananas in the AM.
- Afternoon delivery of combined store banana orders to outsourced state-

based distribution centres.

- The next day delivery to the 7-Eleven retail stores along with other store merchandise, some of which is perishable. Stores are typically receiving deliveries of bananas every 2-3 days.
- On counter retail merchandising in plastic bowls as per the adjacent picture for $1.20 each.
- Involvement in the 7-Eleven promotion programs, which has included offers of selling with co-products like water, as per the display picture and “two bananas for $2”.

This retailer has been kept informed of retail merchandising systems developed as part of this project. Details of their store network locations have been obtained and forwarded to HAL to provide scope for the alignment of external poster adverts that promote bananas as snacks on the run.

Other C-stores

The development path for other C-stores was led by contacts with suitable retailers and then referred back to their distributor. The basis for selecting partners for this trial was that the combination has clear scope for extension into a commercial trading relationship.

The distributor selected was Farm Fresh Central (FFC) who is located on the fringe of the Brisbane Rocklea fruit & vegetable markets. This operation services 150 plus C-stores located from the Gold Coast up the central coast with a range of food and beverage products. FFC also runs a service that delivers directly to households. The punnet banana product was agreed as suitable for both these channels.

Twenty of the merchandising units, as profiled in appendix C, were produced and 10 of these units were provided to FFC.

Pacific Coast Eco Bananas organised for the supply of ripened bananas in punnets. This was enables through their wholesale agent RE Tipper, from mid-Aug 2010. The recommended pricing structure for this pilot has been guided towards the following framework. As defined as a core principle in this project, a key aspect of pricing model and is to sell at retail on a per piece basis.

Recommended pricing structure, which has been designed to reflect where value is added.

	Grower	Wholesaler/Ripener	Distributor	Retail price
Per piece	$0.29 - $0.31	$0.36 - $0.39c	$0.57 - $0.64	$1.00 - $1.20
Per punnet (7)	$2.00 - $2.20	$2.50 - $2.70	$4.00 - $4.50	$7.00 - $7.70

This pricing structure recommendation is now available for use within the commercial relationships and supply chains that would service this channel.

A quantity of trial stock has been provided to the retailers and the trials and the early feedback from the stores has been positive. There is no intention to stop the trials with plans to encourage them to progress into a trading relationship based on retailer and consumer acceptance of the product.

5.3 Cafe/Lunch Bars

The development path for other café/lunch bars was led by establishing contact with a food service distributor. It was critical to find a distributor who was servicing the targeted type of café/lunch bars and had capacity to handle fresh bananas.

Pacific Coast Eco bananas supplied the bananas and the ripening and wholesaling was managed by Fruit Avenue in the Melbourne Footscray markets.

The basis for selecting partners for this trial was that the combination has clear scope for extension into a commercial trading relationship.

The distributor selected was Del-Re National Food Group located in Tullamarine, Melbourne. This distributor identified five Café lunch bars and all were supplied with a trail merchandising unit, same design as Appendix C, but made up from 2-3 smaller units and a quantity of punnets. The brief was to get these units in front of consumers for sale at $1.20 per banana.

The five locations involved were:

- **In A Rush** -Melbourne
- **Coffee Minded**- Southbank
- **Cafe 201**- Melbourne
- **Issus** – Melbourne
- **Mosaics** – Tullamarine

The feedback from the operators was mixed and can be summarised as follows:

- The unit presented well and most of them sold
- The bananas were smaller than we normally get
- The unit took up a lot of counter space
- The staff didn't know enough about them to sell them
- We can buy bananas in cartons cheaper and make more margin
- We are more of a blue collar "bacon and egg burger" location. It is too healthy for them.

Conclusions

- Some café/lunch bars are more suited than others to selling bananas.
- Some time needs to be put into explaining how it all works.
- Those who can source cartons of bananas are unlikely to participate.

- Retail chains, the likes of Café Club & Gloria Jeans, should be approached as they are likely to have systems in place to disseminate information about offers like this to their stores.

6. Communication/Extension activities

During the course of our study, we communicated with the following stakeholders and centres in order to collect data and information about the capability of the alternative channels to distribute bananas to consumers in the Australian food industry.

Communication Points	Details
A. Website	1. Project details were uploaded to the *Freshlogic* website on the commencement date. This allowed growers and industry members to understand the **project outline**, the **project objectives** and the **key issues** to be faced by this project. 2. This was followed up by progress updates in conjunction with milestone reports, allowing interested parties to gain an understanding of the findings that we had come across and what outcomes this has had on the direction of the report.
B. Press	**Publication:** Australian Bananas **Article title:** Exciting new distribution channels**,** *July 2010.* The article in the July edition of the Australian Banana magazine detailed the aim of the project, the learnings gained from overseas operations, key learnings from the assessment of the local market and links to the Freshlogic website for further information on the subject.

7. Appendices

Appendix A: Website www.freshlogic.com.au

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You are here: Capability » Industry and Market Analysis » Banana market development

August 31, 2010

Investigating alternative banana distribution channels

Project Outline

This project aims to find and establish alternative distribution channels for fresh bananas into the Australian domestic market. The overriding goal is to discover more ways to get bananas to consumers with a focus in and around snacking occasions.

The project has been commissioned by Horticulture Australia Limited (HAL) and is managed as project number BA09034 with funding from levies and matched by contributions from the Federal Government. It is programmed for completion by August 2010.

Project Objectives

- Assess the volume and value potential of these alternative distribution channels by state and rank on the basis of their potential to distribute bananas
- Explore the value that can be provided by using packaging and merchandising innovations to enhance shelf life or lift sales levels
- Identify the logistical solutions required to service these channels
- Establish and run retail trials to test and confirm the logistical and store operational solutions required

Key Issues

This project has many challenges that are largely centred on distributing a perishable product through a distribution channel, which is light on the skills and capacity to handle short-life perishables. However, globally the development of alternative channels has been underway for some time and their learning have already reached the local market. It is expected that the solution will be impacted by harnessing the advantages of packaging innovations that reduce order multiples, enhance shelf life, and enable easy and effective merchandising. It is also clear that an increasingly health-conscious consumer is highly likely to welcome the expanded availability of good quality ready-to-eat bananas.

Progress to Date:

- Consolidated all existing and relevant material and established their implications for the Australian market. The following findings have resulted from our study:
  - International banana organisations like *Chiquita* and *Del Monte* have conducted tests of bananas trials in convenience stores (C-stores), cafes, foodservice, catering, and vending channels in the US. Several of these C-stores have enjoyed success and have now gone past piloting and conducting trials of bananas into commercial trading. The key learning from these trials include the following:
    - Selling bananas by "each" rather than by random weight is possible in these types of stores that essentially provide convenience
    - Many types of specially packaging innovations have undergone trials and have been introduced, which are aimed at the issues of reducing excessive product waste at store level by enhancing and extending shelf life, and/or reducing order multiple, and enabling effective merchandising
    - A shared logistical solution that allows stores to order and receive smaller (4-5 kg) quantities daily and in doing so, keeping the products fresh and not discouraging the store operators with excessive stock exposure

  Hence, there is every indication that the precedents of these trials can be applied to the Australian market with success.

- Identified the two alternative distribution channels, C-stores with 776 outlets and Cafe/lunch bars with 900 outlets. These outlets are estimated to have capabilities to sell 10-15 kg of bananas per week.
- Identified and developed two different types of distribution infrastructure required to service both C-stores and Cafe/lunch bars, which involve the flow of bananas through the following channels:
  - Growers
  - Wholesalers/ripeners
  - Cross docking/foodservice
  - C-stores/Cafe/lunch bars

The Australian Banana Industry participants are invited to access this page to remain updated on the project's progress. Input is welcome and can be directed to Matt Evans, Market Analyst, Freshlogic at matt@freshlogic.com.au or 03 9818-1588.

Appendix B: Australian Banana Magazine

Exciting new distribution channels

Martin Kneebone
Director Freshlogic

This project has set out to find new channels to distribute fresh bananas in the Australian domestic market. The rationale for the project was based on the mature status of banana sales through supermarkets and greengrocers and the untapped opportunity to sell bananas to today's time poor consumers who are seeking a snack on the run.

The assessment found that from late 2009 there has been development activity in several markets to sell bananas through new channels. Del Monte and Chiquita had both recently extended retail trials into full distribution in separate groups of convenience store channels in the United States. These two global enterprises have explored a number of variables including packaging to enhance shelf life, selling basis, order quantities, delivery service levels and merchandising.

The development momentum flowed through to the Australian domestic market with the 7-Eleven Convenience store network now ranging bananas, see pictures, from late 2009 in the 350 stores they operate in the metro regions of the eastern states. The 75 store network of the Queensland based Nights Owl Convenience store chain also range bananas. These developments were considered in assessing the Australian market potential.

The key learnings from these developments and the assessment of the local market potential are:

- Bananas can sell as single pieces of fruit through these types of distribution channels as consumers are willing to pay for an element of convenience
- A selling price in the region of $1 to $1.20 per piece generates the income required to support the additional packaging, handling, tailored ripening and additional servicing required delivering product, in optimum eating condition, to these retail outlets
- a key enabling factor is a logistical system that can provide small daily quantities, in the region of two – three kilograms per order, to these types of stores. This serves to reduce the incidence of waste/ shrinkage at store level and provides them with the "ready to eat" product that snack buyers will purchase
- Packaging for additional shelf life is not considered viable. The solution is to ensure stock rotation and waste are acceptable through frequency of delivery and sales promotion.

It has been established that there are 560 convenience stores that have common logistics providers and also 900 café lunch bars in suitable locations.

Supply chains have been arranged, merchandising fixtures have been developed (see pictures) and trials are underway.

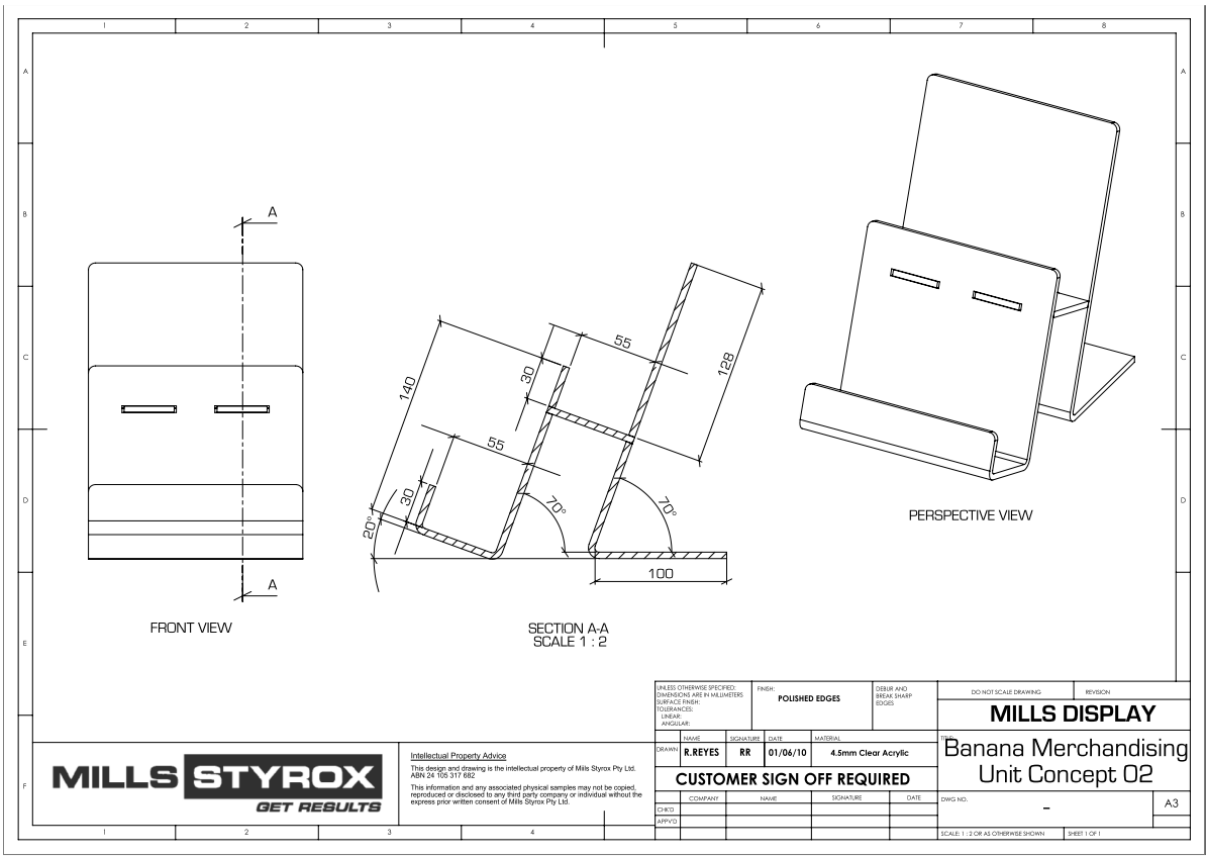
Updates of the project are provided on Freshlogic's website *www.freshlogic.com.au*

For further information telephone Martin Kneebone, Director Freshlogic.

T 03 9818 1588
E martin@freshlogic.com.au

BA09034 Investigating Alternative Banana Distribution Channels

Appendix C: Retail Merchandising Display Units



This unit can be purchased by any banana producer, wholesaler of retailer who wants to use it to develop and support retail channels to sell single bananas. This is the unit that was developed and used in the trials in this project.

The unit cost is approximately $24.00 each+ GST. MillsStyrox have offices in each state and can be contacted on (03) 9558-3577.

Appendix D: Retailer guide

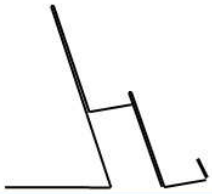
Banana in punnets for sale by single pieces

- 7 pieces of fruit per punnet
- Order unit of 1 punnet
- The red tip banana is recognised by 95% of consumers as a higher eating quality banana that is produced with eco/environmentally friendly methods.
- Designed to retail by each banana at RRP of $1.00 to 1.20 ea.
- The supply system for these bananas is designed to eliminate the waste associated with full carton quantities and handling damage.
- Supply is planned to be based on frequent deliveries to allow banana's to be supplied in a "ready to eat" condition.
- A stepped Perspex merchandising fixture has been designed to hold two of the above punnets as per the adjacent sketch (B) and photo (C).
- This merchandising unit requires a footprint of 19cm by 15cm.
- The photo shows the stock on show and how the front top shoulder of the cardboard punnet is removed when the punnet is out on sale to allow access to the fruit.

Contact details
Martin Kneebone
Freshlogic
03 9818 1588
martin@freshlogic.com.au

A. Order unit, 7 pieces per punnet in cartons of 12 punnets

B. Side view of merchandising unit



C. Stocked merchandising unit with front shoulder of punnet removed

freshlogic

Appendix E: Foodservice distributor guide

Eco Banana in punnets

- 7 pieces of fruit per punnet
- The red tip banana is recognised by 95% of consumers as a higher eating quality banana that is produced with environmentally friendly methods.
- Designed to retail by each banana at RRP $1.00 to 1.20 ea.
- Wholesale price $2.50 per punnet delivered in cartons of 12 punnets.
- Suitable for retailers with scope to sell a fresh fruit snack. It is expected that this will be best suited to those who have a lunch trade and or enjoy higher levels of daytime pedestrian traffic. Also suitable for those servicing direct to home deliveries.
- The supply system for these bananas is designed to take out the inventory waste risk. It is centred on a smaller store order multiple of 1 punnet. This punnet is packed on farm and eliminates the need for any other packaging. In this form fruit can be ripened and handled without the being touched up until it is purchased by retail customers.
- Supply is planned to be based on daily deliveries to allow banana's to be brought through to a "ready to eat" condition.
- 24 order lead times are assumed.
- Interested retailers will be provided with 10 stepped Perspex merchandising fixtures that will hold two of the above punnets as per the adjacent sketch and photo (B) & (C). The photo (C) shows the stock on show and how the front top shoulder of the cardboard punnet is removed to allow consumer access.

- Freshlogic are fresh food consultants and are responsible for identifying suitable supply chain partners and organising the trials. If the trials are successful then the parties involved will be able to extent the pilots into ongoing supply arrangements.

Contact details
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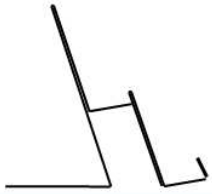
03 9818 1588
martin@freshlogic.com.au

A. Order unit, 7 pieces per punnet in cartons of 12 punnets

B. Side view of merchandising unit



C. Stocked merchandising unit with front shoulder of punnet removed

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8. Information sources

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