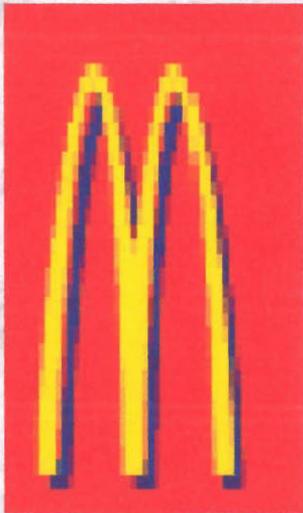


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Kellogg Rural Leadership Programme

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Kelly, David (2001)

The making of Kiwifruit



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Kiwifruit

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Executive summary

Global consumer trends are giving a clear signal to the fresh fruit producers.

Despite the introduction of some excellent new cultivars of many fruit varieties, worldwide consumption of fresh fruit is flat.

Supermarkets are however growing the fresh fruit category at the expense of other more traditional fruit retailers, placing pressure on price and adding cost through increased traceability requirements.

The big growth areas are in prepared foods and restaurants. The development of entirely new categories such as energy drinks has been impressive. The health food and vitamin industry has also seen steady growth.

The industry must either focus on increasing consumption against the flat market trend or develop products that are relative to the current trends or both.

Traditionally the industry has focused its research on plant breeding and cultural issues (post-harvest pest and disease etc). The market signals are highlighting new priorities for research to focus on. The “Holy Grail” of an edible skinned, red fleshed, good tasting and good keeping Kiwifruit may no longer be appropriate goal.

Product development based around market signals is vital for the industry’s survival. The **industry** needs to develop and **own** technologies focused on turning fresh Kiwifruit into a convenience health food focussing particularly on “Energy”. Consideration to the suitability of these products to be sold via vending machines and retailers other than supermarkets should be given so as to lesson the dependence on supermarket distribution. Orchards are little more than factories that produce fruit. The lower cost structures of other countries have scene the factories of industries such as electronic manufacture and clothing manufacture relocate offshore. Owning the raw material is no safeguard to maximising return from new technologies. The industry needs to be mindful of the fact that the cappuccino machine has done a lot for the cafe industry but had little effect on coffee producers.

Introduction

The Context and Issue

The Kiwifruit industry faces some significant challenges in the near future.

- The New Zealand production is expected to move from 60 million trays to 80 million by the year 2005.
- As third world countries with lower labour and compliance costs, develop systems and improve quality, they threaten the New Zealand's producer's profitability.
- Changes within the supermarket industry are adding costs, eroding brand strength and generating increased downward wholesale price pressure.
- Profit taking by supermarkets limiting consumption.

Objectives

This report sets out to look laterally at a variety of market trends and current growth areas. It reviews these areas and trends with the objective of identifying commercial opportunity. It suggests paths to follow in order to realise these opportunities. Finally and most importantly it prioritises these opportunities relative to the current research and development focus.

Summary of findings

The report finds that in the light of the current market trends the traditional priorities of plant breeding, post harvest physiology and cultural practise should take a lower priority than research into fruit processing. Processing not in terms of pulp or juice but in terms of fresh peeled and sliced, specialist athletic tonics, cosmetics, pharmaceuticals, in store preparation and "new age" alcoholic juices. It is vital that the industry owns the technology rather than supplies the raw material and thereby remaining only in the commodity market.

Structure

The report takes a "snap shot" approach to

- 1. Fresh fruit production and consumption**
- 2. Consumer Trends**
- 3. Retail Trends**
- 4. Processing**
- 5. Environmental issues**
- 6. Research and Development**
- 7. The Success Stories**

and looks at case studies and articles relevant to the above that make up the overall market environment. These snapshots are then reviewed in an effort to stitch together a "big picture"

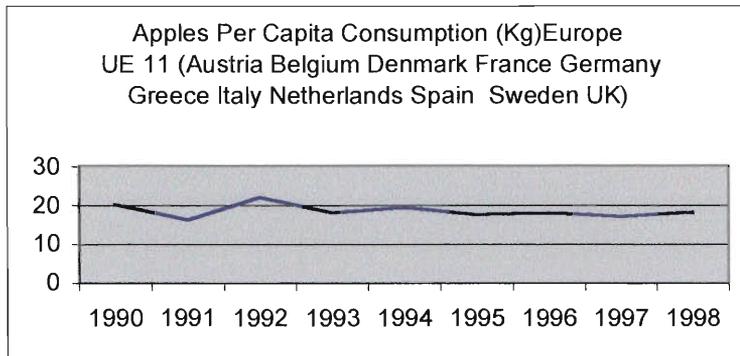
Scope and limitations

The report offers some concept products or processes. By taking a "reverse engineering" approach it is hoped that the road to development will produce the real rewards rather than these concept products ever being successful in their own right. In addition it attempts, by evaluating some successes and failures in the added value field, to set a direction and highlight some pitfalls on the way through. Some market statistics in Europe have shown some large variability, which casts some doubt on the absolute reliability of some of the data. American and Japanese data has been more readily available and seems to show less variability. From time to time I have assumed that market trends in America and Japan are likely to be relative in Europe as well.

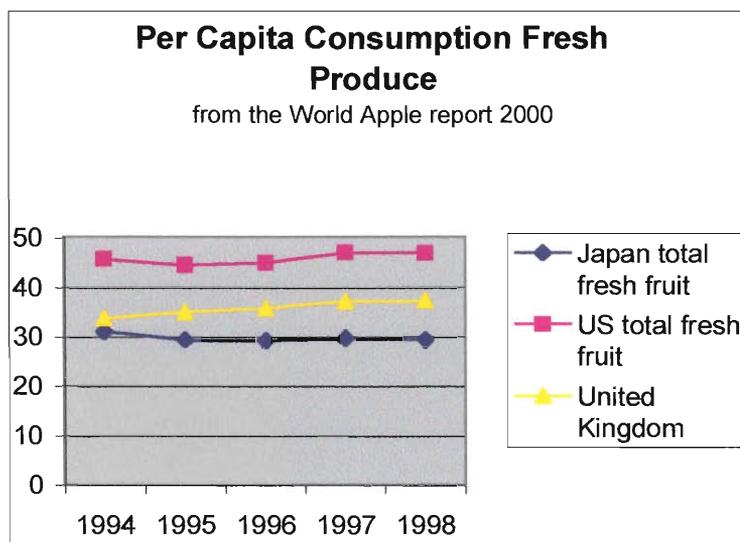
Fresh fruit production and consumption:

The 2000 Edition of The World Apple Review shows that apple consumption in Europe has been at the best flat to declining (see figure 1) This is despite the introduction of a number of new varieties of apples.

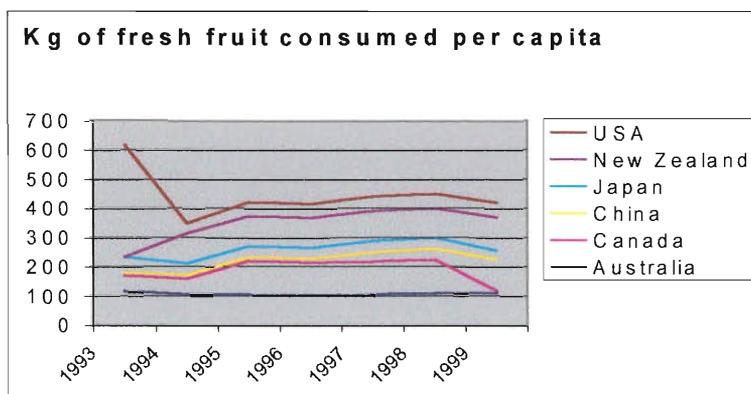
The concept of a ready to eat Kiwifruit that required no preparation as in apples has always been a priority for the Kiwifruit industry's plant-breeding programme.



. Total Fresh Fruit produce consumption in Japan and the US is also flat to declining.



These trends are confirmed by statistics gathered by Euromonitor.



This is an ominous trend considering the predicted growth in Kiwifruit production over the next five years. Kiwifruit competes of course with all fresh fruits not just other Kiwifruit.

Consumer Trends

Consumption of fresh fruit is flat. What are consumers eating and why?

Fast Food and Poor Diet:

The New Zealand Herald (14/07/2000) reports that tough new action is needed to force food companies to warn their customers that their food could be killing them according to a report by The Australian Federal Parliament information and research services. The report recommends a labelling code that will require all manufacturers to include a break down of fats in their food. New Zealand now spends about a fifth of their food spend on fast food or ready cooked products. The report warns of massive health budget blowouts if the dietary trend continues.

BBC news reports 3/06/1999 “Europe is on the brink of a public health catastrophe and could face a new epidemic of diabetes, heart and other diseases, international obesity experts have warned. The European Association for the Study of Obesity (EASO) has called for action from governments to deal urgently with the need to improve people's diet and levels of activity”.

Similarly the BBC news reports on the 27/04/2000 that “Nearly half of parents in Britain do not think their children eat a healthy diet, according to research.

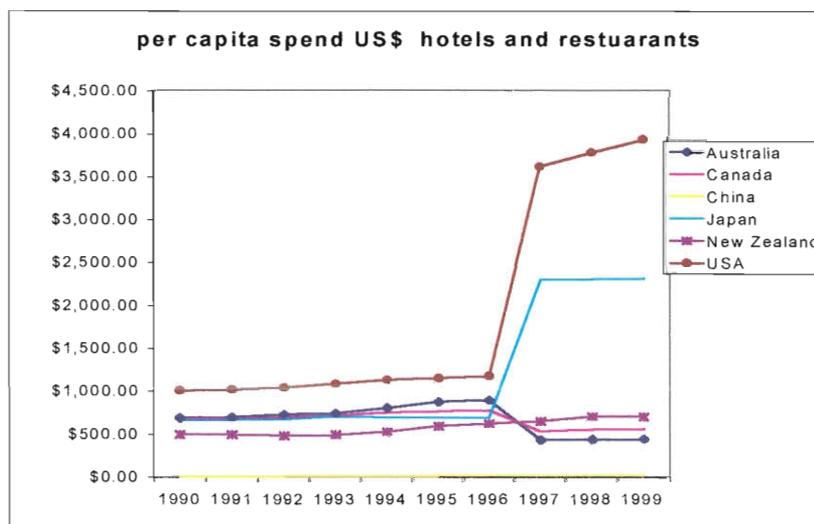
This is despite the fact that the majority of parents questioned feel they themselves are responsible for ensuring that their children eat healthily.

The report, carried out for Iceland by research company Mintel, suggests that because many parents themselves admit to having a poor diet, they are unlikely to pass healthy eating messages on to their children”.

Martin Croft states in an article entitled “Chipping away at tradition” (Marketing Week London Jan 7, 1999).

“According to the Taylor Nelson Sofres Mealtrack survey, Britons now consume more than 2 billion meals a year at restaurants, pubs or cafes, or from takeaways - nearly 12% more than 2 years ago. The UK eating-out market is now a very significant one, with an annual turnover of more than L10 billion. More than a quarter - 28% - of all food expenditure in the UK goes to eating out; but there is still room for growth, with the equivalent figure for the US standing at over 50”

Statistics gathered by Euromonitor confirm the fast food eat out trend.



A preliminary report on the Kiwifruit industry commissioned by Zespri notes that time constraints associated with dual income families and a general increase in the pace of life has also seen the evolution of breakfast to three distinct categories.

1. The eat out breakfast
2. The on the go breakfast food easy to consume while driving or commuting
3. The deskfast- a new term describing food similar to 2 above but consumed at the desk ie stationary

Slow Food - The backlash:

In a Panorama (August 2001) article entitled “Slow Food” an interesting initiative by Carlo Petrini was outlined. Essentially it was a movement set up in a reaction to Macdonald’s opening a restaurant in the Piazza di Spagna Rome.

The movement sets out to embrace the sensual pleasure of food from the farm to the plate. Everything fast food is not.

“We need to eat less eat better and treat our food with respect”

“ May suitable doses of guaranteed sensual pleasure and slow long lasting enjoyment preserve us from the contagion of the multitude who mistake frenzy for efficiency.”

These are two memorable quotes by Mr Petrini.

While currently less than 3% of Italians regularly go to fast food restaurants, 90% of American children eat McDonald’s every month. The average American eats three hamburgers and four orders of French fries a week. Americans also spend more on fast food than higher education or new cars.

The movement is more than just taking time over eating. The slow food movement is a rallying point in the fight against what is being called the “McDonaldisation” of Europe’s society. It sees the fast food trend eroding family values and cultural practices such as the family meal. It also points out that the trend is a threat to bio-diversity quoting that there were 200 varieties of Artichoke in Italy at the beginning of the century and now there is only 20. While this movement is relatively small (70,000 members) it may well grow significantly and should not be ignored. The concept marketing Kiwifruit, especially Zespri Gold™ as a slow sensual taste experience is far from incompatible and meshes well with European values.

Health Supplements – debts and credits

Growth in health supplements, such as vitamins have been steady. The Kiwifruit industry preliminary report talks of the debts and credit philosophy that the market appears to follow. Specifically if you eat something unhealthy it can be undone by a vitamin pill or a work out at the gym.

In an interview with Kris Rich Marketing Manager Healtheries, the growth of the health supplement market was discussed.

The main drivers were

1. An aging population
2. No one has time to get sick
3. Natural remedies are becoming more mainstream
4. A growing distrust of food nutritional content

Dieting aids weight loss supplements and the “low cal” market have also experienced significant growth and interest from investors. Unilever recently purchased Slim Fast Foods for US \$2.3 Billion.

There are estimated to be 51 million frequent fitness participants in the US (current population 280 million).

The Future

Elizabeth Sloan of writing in Food Technology (April 2001 vol 55 no 4) writes of a recent survey that asked the question “if you could design a magic pill what would it do?”. “Give me more energy” was the answer. This is endorsed by other surveys, which looked at the motivation for health supplement purchase. Energy boost was number 2.

The article goes on to talk of functional food trends and energy being ranked as the highest attribute. “ Formally the exclusive province of athletes, energy and sports beverages, bars candy, powders and other food forms are fast approaching 4 billion \$US in sales...Energy supplements a very difficult category to track are estimated at \$850 million by AC Neilson/SPINS.”

Of perhaps most interest was the prediction that Sports Nutrition was an untapped market and expected to jump from \$4.67 billion to \$7.2 billion by 2004 in the US alone. “Energy has achieved a mega-market status reserved for only a few nutraceutical ingredients /markets including protein and calcium /bone health”

Retail Trends

How are retailers responding to consumer trends and what other issues will necessitate change to the Kiwifruit Industry?

Supermarkets

In a presentation to New Zealand Kiwifruit Growers earlier this year The David Oppenheimer Group outlined some key issues that they faced as agent for Zespri™ in America.

1. Consolidation:
 - The top five players could have a market share of 50% by the year 2002
2. Customers are dealing with fewer suppliers- reduction and consolidation of suppliers
3. Global over supply
4. Retail margins/ stock market instability
5. US protectionism
6. Food safety
7. Palletisation and packaging
8. EDI e-commerce and confusion there of

Produce was the rising star for supermarkets. The margins that they were able to take far exceeded other lines. Growth, at the expense of more traditional retailers was being experienced. Produce was expected to grow to from its current 11% to 15% of total supermarket sales. It is predicted that produce will make up 25% of the supermarkets profit (today 17%). New packaging technologies will see fresh cut fruit reach similar level of fresh cut vegetables. There was also a significant trend and pressure to house brand for supermarket chains. This practice threatens the proprietary brand name and is likely to be de-powering and price erosive.

The future predictions were laid out as:

Current	Future
Fat counting	Phyto-chemical counting
Low fat foods	Functional foods
Recipes 5 to 10 ingredients	Less than 3 ingredients
30mins or less for preparation	Less than 5 mins
Meals in a cup	Meals in a pill
Ready to eat carrots and dip	Cancer curing carrots
Pre cooked flavoured chicken strips	Vegetable protein analogues
Gourmet supermarkets	Electronic supermarkets

In addition the trend for consolidation was likely to continue. Frequent shopper cards will grow to all retailers. Increased investment in food service and food preparation- pre prepared meals etc. Returnable containers will be a requirement. Supermarkets will source most of their produce from less than 10% of their suppliers. Traceability and food safety will become even more significant.

In summary, supermarkets are growing their buying power through consolidation, adding cost to the supplier through increased compliance requirements, taking market share from the more traditional fruit sellers, eroding brand strength through house branding and possibly decreasing demand by profit taking at volume limiting prices.

Processing

Added value has been a success story for many primary industries. Does it have a place for Kiwifruit ?

The Cappuccino experience -how not to

The Cafe industry has undergone some significant changes over the last few years. A cup of coffee has evolved from being available from a machine costing under \$300.00, as black or white in a bottomless cup at a price of \$0.50 to a multitude of varieties dispensed from machines often costing in excess of \$8,000.00 and at a price increase of over 600%.

Had this change been predicted I'm sure that few would have held it credible.

Coffee producers have not shared in this astonishing growth.

In store Processing

The success of in store processing eg juicing has been an interesting phenomenon. The concept of seeing high quality produce enter a machine and returning juice has gained acceptance.

Casual interviews with consumers mentioned freshness, quality and food safety as drivers. Many consumers have doubts as to the quality of fruit used for factory prepared juice.

If a machine were developed that peeled, sliced and packaged fruit in a ready to eat manner (possibly on a skewer much like a Kebab) would we see a similar revolution?

Where would the machines be best placed ie cafes, supermarkets, specialist fruit stores or vending machines?

If the concept were viable growers would need to own or at least share in the technology in order to avoid the coffee producer scenario.

Environmental issues

Is New Zealand at a competitive disadvantage because of our current environmental legislation?

Costs and our Competitors

The price of living in a relatively developed economy includes the cost of complying with many different regulations (RMA OSH ACC etc). The cost of labour is also significantly higher than some of our competitors. How then do we compete or stay ahead of the developing countries that see horticulture as a way to improve their economic lot. Not only are the costs significantly lower, the development is often government funded. We have seen many manufacturing operations move off shore especially in clothing and electronics. Orchards are simply factories producing fruit.

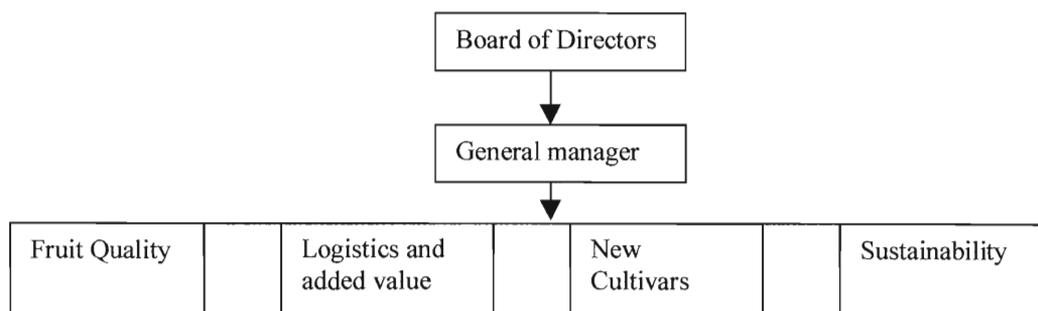
Other industries like Dairy have employed a number of strategies to meet the challenge. One of which has been huge capital investment in Dairy onshore infrastructure either efficiently producing commodities or producing high tech high value products protected by intellectual property rights.

In the presentation given by Alan Frampton at Lincoln University, the success of developing intellectual property around high value processing was outlined.

Research and Development:

What is the Kiwifruit industry's current R&D structure and focus?

The current industry structure has enabled the development of a research and development company Zespri Innovation Limited. It is important to note that the single desk marketing approach has allowed this to happen. The current structure is set out below



Last year's operating budgets were \$0.9m for fruit quality, \$0.7m for logistics and added value, \$0.9m for new cultivars and \$0.8m for sustainability.

The Success Stories

What has worked and why? Can it be used as a template for the Kiwifruit Industry?

Red Bull™

To many extents the Red Bull™ story offers one of the best examples of market driven product development that we have seen in recent times.

Since 1996 to 2000 Mintel reports that energy drinks like Red Bull™ have increased 366%. In the UK alone sales of this category were valued at 615m £. Red Bull™ controls 86% of the market.

Red Bull™ was the brainchild of Austrian businessman, Dieterich Mateschitz, and has made him a multi-millionaire and the richest man in Austria.

BBC news reports (13/07/2001) that in 1984

“Dieterich Mateschitz adapted it from a cheap tonic called Krating Daeng (Thai for Red Bull™) that he discovered in the early 1980s in a brown bottle in Bangkok, a favourite tippie among blue-collar workers in the Thai capital, trying to stay awake through the long hours of labour.

It was the marketing, which proved the masterstroke. As a former Procter and Gamble salesman who peddled toothpaste and shampoo, Mateschitz knew the importance of branding.

He realised it would be impossible to convince the factory workers of Vienna to give up their morning coffee, so he decided to target the young urban professionals who also work long hours but who have more cash to flash.

By offering instant energy, a designer image and an association with glamorous sports and lifestyle, the marketing men had achieved a mix as potent as any Red Bull™ cocktail. It hit the spot. In the words of Mateschitz himself, Red Bull™ spread "like an avalanche or a bush fire".

Why, despite all the money Pepsi and Coca-Cola spend each year on product research and development, were they followers and not leaders in this new energy drink category?

I suspect an issue focused rather than a market focused R&D programme may well be the answer and that parallels may be drawn across many industries including the Kiwifruit Industry. (See R&D current structure)

Smirnoff Ice™

The New Zealand Herald 8/09/01 reports that Diageo, the worlds largest producing liquor company, increased second half profits by some 26% after introducing new drinks like Smirnoff Ice. Diageo also owns Burger King which is suffering a slump possibly linked to BSE issues. Smirnoff Ice was attributed to offsetting the Burger King slump. In fact Smirnoff Ice sales increased 52%. Canadian research reports that the growth in ready-to-drink beverages is the fastest of all liquor categories.

It is an interesting observation to note that Zespri Gold™ has very similar fermentation properties to grapes (sugar acid ratio).

The Big Picture.

1. Despite the public becoming more informed about health and diet worldwide per capita consumption of fresh produce is flat to declining.
2. Obesity is on the rise the populations average age is increasing and Governments are concerned about Health budget blow outs.
3. Consumers play a game of debts and credits with their health. They can eat something unhealthy as long as they go to the gym or take some anti oxidant pills.
4. Consumers are spending more on restaurant foods and prepared meals.
5. The New Zealand Kiwifruit production is set to increase 33%.
6. New varieties tend to cannibalise the fresh fruit category (often within the variety) and not grow the category.
7. “Energy” is the most desirable attribute of food or functional foods
8. Time is a valuable commodity and restrictions there of are driving change to our eating habits. Eat on the run etc
9. Supermarkets are strengthening their buying power, adding to costs through increased compliance costs, and threatening our brand strength through house branding.
10. Sports Nutrition is predicted to be a high value, high growth category.
11. Production costs on shore are high compared to our competitors.
12. Research and development currently combine logistics and added value in one portfolio. This portfolio has the smallest budget

The Conclusion

There is little doubt the launch of Zespri Gold™ added value to Zespri and has been a success for the growers. Indeed it is the flagship for Zespri and a real point of difference to its customers. It is important however not to see new varieties as the panacea for all ills. The industry has witnessed significant cannibalisation in some markets and overall the fresh fruit category growth has not been strong.

Essentially there are three choices

1. **Get more people to eat fresh Kiwifruit through consumer education and promotion ie change the market trend and rely on the plant breeding programme to retain excitement and offer points of difference**
2. **Exploit the current market trend through product development.**
3. **Do both**

Option 1 Is high cost does nothing about the threat of our lower cost competitors nor does it offer any strategies in respect to the supermarket dominance. It is also easy for competitors to ride on the coat tails of the promotion.

Option 2 Product development offers the opportunity to develop intellectual property and create a point of difference. It may also lessen the dependence on the supermarket trade. Will Red Bull™ be house branding for Tesco's? Option 2 is a proven strategy for other producers such as Dairy.

The one thing the industry does not want is to be supplying a raw material to a third party who takes the profit, much like the coffee growers and the cappuccino machine. These processes and products do not develop themselves.

Recommendations:

The industry should both promote increased consumption of fresh Kiwifruit and develop new products and processes. Clear priorities need to be set. The latter has some significant advantages with respect to intellectual property and diversifying our distribution network. Alternately our current dependence compels us to meet and exceed the expectations of our existing customers with respect to systems, quality, traceability and any other requirements they have (within reason). A watching brief needs to be kept on the “slow food” movement. There are likely to be niche opportunities to promote Zespri’s fruit alongside this movement.

It is my recommendation that Zespri Innovation separates product development (added value) from logistics and creates its own specific portfolio. It then needs to reprioritise its research projects and if necessary secure additional funding to develop products aimed at capturing market trends.

The products will not develop themselves and if the growers is not in the loop then his fate as a price taker is set.

It absolutely essential that the industry secures intellectual property either through developing the processes itself or by joint venturing.

Based on my research I have “developed” 4 concept products. They are offered as starting points only. That is to say that before developing a machine that for example peels Kiwifruit and puts them on a stick we first need to test market the concept by hand peeling, slicing and skewering etc and that through this process these products would evolve.

Concept products:

Zepop: A kiwi on a stick.

A Kiwifruit placed in a small vending type machine and the machine skewers it with a stick and peels and slices it in a helix or cork screw pattern. The product is then bagged. It is readily eaten with one hand while you drive to work.

Fruitsicle:

Fresh Kiwifruit and other specifically selected fruits (melon, peach, apricot etc) are sliced diced and placed on a shish kebab stick. High caffeine-chocolate is used to coat dried Kiwifruit slices placed strategically along the kebab. The stick is packaged in a clear “smart” plastic tube and sold from the cooler in the supermarket or direct from franchised vending machines. This is the perfect health pick-me-up. Nutritionists have specifically selected the combinations of fresh fruit to synergise and produce the most readily available natural energy source known.

Zesprigold Athlete Juice™

Go for GOLD

Specialist product infused with native herbs found only in NZ. Completely balance by the addition of naturally occurring amino acids to **energise** the body. This juice is more than just of 200 plus days of the purest sunshine of New Zealand. It is the essence of our country. It takes the freshness of the Southern Alps, the power of the West Coast and the life force of our forests and bottles it. Picture 20 All Blacks delivering a spine chilling Haka then a rolling maul, steam and sweat, followed by Lomu crashing through tackle after tackle- Zespri have captured this energy and bottled it. **It is energy** in a bottle.

Kiwigoldfire™

Kiwifire is a carbonated alcoholic fruit juice. Packing more than a punch, infused with caffeine and served with a slice of fresh Kiwifruit, it is the cult party product of choice by the extreme of the extreme sportsman. It puts the Zing in Zespri. This product doesn't give you wings; it gives you a fully fuelled and armed F16. The only question is can you fly?

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