

A close-up photograph of a chef's hands holding a large, cooked crayfish. The chef is wearing a white shirt and a black apron. The crayfish is dark brown with bright orange legs and claws. The background is slightly blurred, focusing attention on the chef and the crayfish.

UP THE 'VALUE-ADD' LADDER

Up the 'Value-Add' ladder was a featured article in the ANZ [Agri Focus](#) September 2017 edition written by our rural economist. The journey into the value-added space is being led by the smaller primary sectors. This paper looks at some of the 'value-added' examples that have come through and how quickly they are being scaled at an industry level to create a more meaningful change in earnings for shareholders including farmers, employees and exporters.

SUMMARY

While some lament the primary sector's lack of 'value-added', examples of exactly this are in fact abundant.

1. In their top five markets Green kiwifruit earn a 40% to 100% premium over the nearest competitor. For SunGold there is an additional premium due to its exclusivity and sweeter taste preferred in Asian markets.
2. Exclusivity and eating qualities desired by Asian markets have put new club apple varieties into a league of their own – earning a 30% price premium over traditional varieties. Volumes of these varieties are moving towards 40% of export supply.
3. New Zealand branded wine's retail price is in the top 11% in the UK and at least the top half in the US and Australia. In both the US and UK markets New Zealand wine is similarly positioned to France price-wise.
4. New Zealand Manuka honey's average export price (FOB) is USD21/kg, whereas most other major honey exporters earn only USD2-8/kg, and an average of USD3/kg. This pricing power is much higher for other product categories that use higher active-rated honey.
5. New Zealand's King Salmon is considered the "wagyu" of the salmon world, where it achieves more than a 50% price premium over Atlantic salmon. Rock lobster is in a league of its own when it comes to value and compared with competitors receives a 50% premium on average.
6. New Zealand dairy companies have generated an extra \$0.64/kg MS of revenue from 'value-add' products over the last three years. In aggregate this has generated \$3.5 billion in extra revenue. Non-milk price product volumes have grown at 20% per annum since 2014 and there is more in the pipeline, looking at recent processing company investments.
7. A number of red meat companies are increasing chilled sales under their own brand with in-market price points generally 2 to 3 times greater than traditional supply formats. There is also a range of initiatives to make more from co-products and target sales through new foodservice and e-commerce channels.

The journey into the value-added space is being led by the smaller primary sectors. Success is turbo-charging returns and asset valuations. The fast followers and larger sectors are seeing more incremental gains at this stage, but there are promising signs of more to come. It is critical that the larger industries such as dairying, forestry and red meat deliver on creating more value.

In the case of the leaders, today's 'value-added' was initiated a decade ago via research & development activities, protection of unique intellectual property, investment in key areas of product development (brand, packaging etc), changing management practices across the supply chain, and a commitment to redefining their business. Microeconomic (firm and individual) decisions taken years ago are now manifesting in today's macroeconomic statistics. The primary sectors and major companies within them haven't been standing still for the past few years either, so the 'pipeline' for further value creation looks pretty good.

Such activity has helped lift New Zealand's terms of trade to the highest level since the 1970s wool boom, boosting the nation's purchasing power. We're extracting value from traditional soft commodities and benefitting from falling prices for the "new" commodities (imported manufacturing and technology products) and low prices for the old (oil).

INTRODUCTION

Estimates suggest New Zealand can provide 40 to 60 million people with their entire daily dietary needs, or put another way, feed 0.5 to 0.8% of the world's current population. Obviously New Zealand specialises in certain products and provides a much larger share of the globe's populace with their daily dairy, beef, sheepmeat, kiwifruit and wine requirements, for example. In fact New Zealand dairy products are estimated to reach over 1.2 billion people each day.

Nevertheless the point remains: natural resource and industry capability constraints (i.e. infrastructure, skilled expertise, capital, scale, type of production systems, location, competitive realities etc) mean New Zealand will only ever feed a very small proportion of the global population – even if one factors in a significant production lift from new innovations or technology.

If you can only feed a relative few (and have naturally higher production costs) you need to target the markets that will pay. The strategic direction of many businesses and industries has shifted in recent years to try to extract greater value from the status quo (i.e. current product mix and raw materials being produced in New Zealand). We say 'status quo' because value extraction has always been an underlying priority no matter what the type of business.

The term 'value-added' is also a consistently moving target due to competitive pressures, continuous improvements and changing consumer trends. Nevertheless there is no doubt many primary sector businesses are placing the catch phrase 'value-added', or some derivative of it, at the core of their strategic plans to increase earnings.

This report looks at some of the 'value-added' examples coming through and how quickly they are being scaled at an industry level to create a more meaningful step change in earnings for shareholders (farmers, employees, exporters etc).

THE MEANING OF 'VALUE-ADDED'

'Value-added' is somewhat of an elusive term due to the changeable nature of markets and consumer trends. Goods considered 'value-add' today could well be reclassified as a commodity over time – a range of manufactured goods that were once considered 'high end' have become commoditised and seen huge price falls over the past couple of decades. The phrase can also mean different things to different businesses depending on the sector and where an entity sits within the supply chain.

To start with, it's useful to consider the definition of a commodity. A commodity is usually deemed to be a basic good (a raw material, or agricultural product) that is easily interchangeable, or substitutable, with other commodities of the same type (e.g. WMP for SMP/milkfat), or similar type (e.g. lamb and beef). Commodities are often used as an input into the production of other goods and services. Quality and price may vary slightly, but it's essentially the same across all producers.

In contrast, 'value-added' describes the enhancement a commodity is given before being consumed/used to distinguish it from the competition and thus obtain a degree of pricing power. In the case of primary sector commodities, this involves enhancement of a product's features, brand factor, service proposition, quality characteristics and packaging. The enhancement of a product's features can come in a number of forms, from extraction and recombination of specific materials from the same commodity (e.g. milk into a range of products), or a range of commodities (e.g. packaged food products). It also includes how the involvement of packaging, other services and specific quality characteristics of a commodity combine to deliver different features, or product experience.

Adding value isn't the be-all-and-end-all – there are plenty of commodity-focused businesses delivering solid earnings and a high return on capital through the 'lean and mean' approach. However, it's generally accepted that 'value-added' should deliver more stable/consistent and higher returns over the long term, albeit not without some risks. The superior returns come from higher profit margins and extracting more value from the raw commodities. This is the opposite of being focused on volumes and cost efficiencies. Efficiencies are of course still very important, but are of secondary importance to extra value creation.

BENCHMARKING 'VALUE-ADDED'

The benchmarking of 'value-added' is debatable and depends on the product and sector. We are interested in the creation of extra value over and above the status quo for a particular product and the returns for New Zealand businesses (i.e. farmers, processors and exporters).

To benchmark 'value-added' we looked at two main themes:

1. In-market product prices for specific sectors and products compared with key competitors.

2. Margin and return creation over and above status quo, or base commodity products within a sector.

A third step would be to assess the return on investment from additional margin creation. While this is important, because many 'value-added' options are capital intensive, due to data limitations and other compilation complexities (i.e. determining capital applied at different production stages) this was considered beyond the scope of this analysis.

THE LEADERS

Some of the leading examples of 'value-added' are in the horticulture sector. Each of the three big crops – kiwifruit, pipfruit and viticulture – have achieved considerable success in carving out higher returns and margins versus their global competition in recent years. This is made necessary by a higher cost base versus key competitors, especially for land, labour and transportation (i.e. New Zealand's distance to some key markets and being off the beaten shipping track). This has created a need to extract more value to survive and compensate for these higher costs.

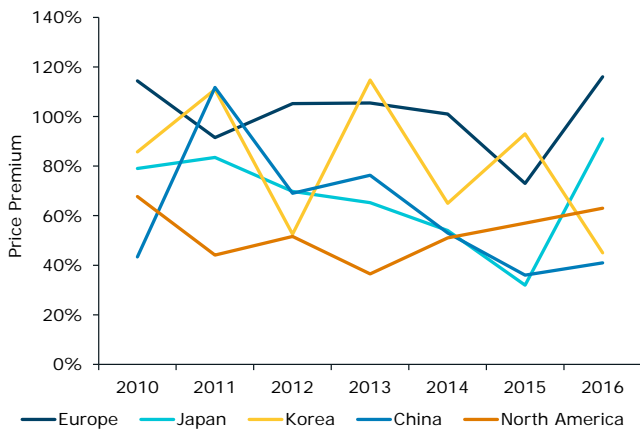
The blueprint for extracting more value has varied, due to each sector having a different structure and back story, but common facets have emerged.

1. The application of best practice management from orchard through to end customer.
2. Applying new innovations/technologies to key facets of producing, processing, storing and distributing products.
3. Market-based payments to producers that reflect the quality characteristics most desired by customers.
4. Product uniqueness with trademarked intellectual property.
5. Targeting of new market segments in Asia and higher-margin food categories (such as health and convenience).
6. Integration and collaboration between supply chain participants delivering extra efficiencies, consistent quality and improving two-way information flow.
7. Creation and investment in strong brands that emphasise uniqueness, quality, food safety, service and the New Zealand story.

KIWIFRUIT

In the kiwifruit sector it's not only the SunGold variety, but also Green kiwifruit that earn a significant in-market premium versus the competition. For Green kiwifruit New Zealand earns a 40% to 100% premium over and above the next best competitor for its five major markets. This is remarkable given Green kiwifruit is generally viewed as the commodity of the category.

FIGURE 1: IN-MARKET PRICE PREMIUM BETWEEN NZ AND NEAREST COMPETITOR

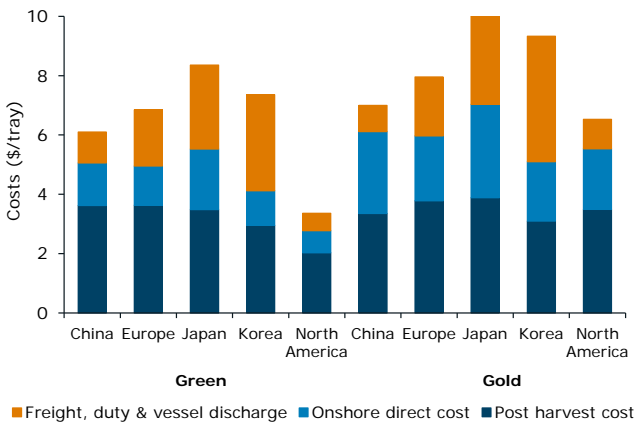


Source: ANZ, Zespri

In the case of SunGold, where there is currently limited competition, the premium is even higher. It's not only the sweet taste of SunGold, which is more attractive to Asian markets, but also the intellectual property associated with SunGold. This is trademarked, meaning supply can be controlled to ensure exclusivity and profitable returns.

The premiums for both Green and Gold help compensate for some of the higher costs of production for New Zealand fruit. Chilean fruit tends to have a cost of production advantage due to lower orchard and post-harvest costs. Domestically produced fruit in both Europe and China have a cost advantage for both transportation and onshore costs.

FIGURE 2: DIRECT COSTS TO DELIVER FRUIT IN MAJOR MARKETS

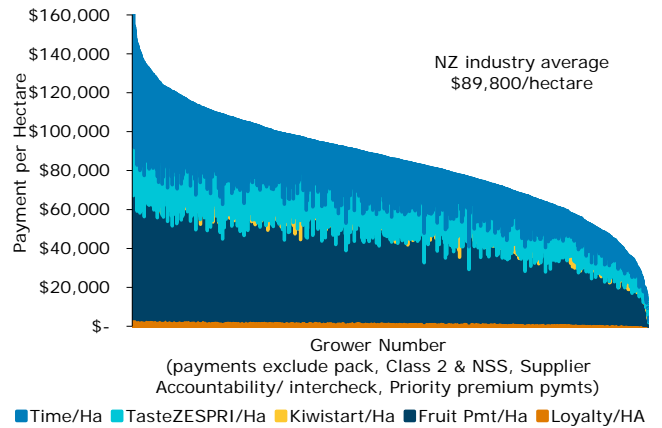


Source: ANZ, Zespri

In-market there are many demand and supply influences that can impact on returns, but to mitigate this, Zespri has established meaningful brand reputation and built up equity through long-term market commitment and investment. Zespri is now one of the top-five most recognised fruit brands in its key markets. It is seen to represent quality, great taste, sustainability and food safety. The Zespri brand, and the associated values and promises it delivers, helps underpin these price premiums for New Zealand fruit. Other factors include:

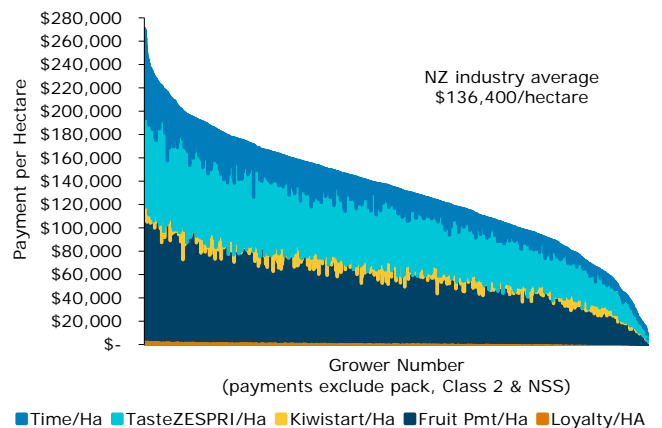
1. Consistency of supply of a high-quality and high-taste product supported by a world-leading supply chain, where growers receive market-based payments reflecting the quality of their fruit. In the last financial year the taste component accounted for 19% of total fruit and services payments (excluding loyalty) to growers for Green and 36% for SunGold.

FIGURE 3: ZESPRI GREEN KIWIFRUIT - FRUIT & SERVICE PAYMENTS 2016/17



Source: ANZ, Zespri

FIGURE 4: ZESPRI GOLD KIWIFRUIT - FRUIT & SERVICE PAYMENTS 2016/17



Source: ANZ, Zespri

2. An innovative portfolio of Zespri-exclusive product offerings (i.e. SunGold, organic), including new and novel products.
3. Significant investment and support of brand marketing and category growth.
4. A comprehensive understanding of the health benefits of kiwifruit.
5. Deep penetration of core markets.
6. Focused development of new high-growth markets.

- Year-round supply of Zespri-branded fruit with New Zealand supply augmented with product from the Northern Hemisphere. This enables Zespri to support its branded offering to consumers all year round, as well as offer a category management solution to large retailers. This is particularly important to support Zespri's category leadership position and the commercialisation of new varieties into a fruit that is consumed every day.

Further growth is on its way with Zespri looking at total supply of 260 million trays by 2025, a large increase from 150-160 million trays at present.

PIPFruit

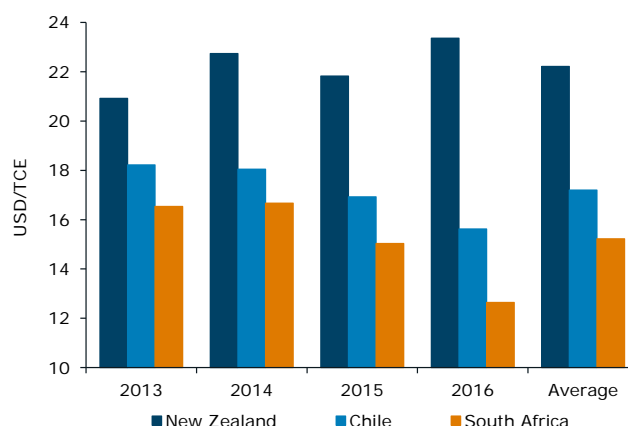
The New Zealand pipfruit industry is currently ranked first for international competitiveness according to the World Apple Review. The Review looked at 33 major apple-producing countries, accounting for 90% of world apple production. Consistency across all the key categories of production efficiency, industry infrastructure and financial/market factors are key to its number one ranking.

This #1 ranking has been further enhanced by:

- A shift to a more vertically integrated structure.
- Applying best-practice management from the orchard right through the supply chain.
- A production system superior to competitors that meets both the ultra-low spray residue requirements of European retailers and the restrictive quarantine requirements of Asia. This boosts food safety credentials.
- New 'club' varieties with trademarked intellectual property and eating qualities preferred by Asian markets.
- New orchard design and management innovations.
- An ability to consistently deliver superior quality pipfruit.
- Brand presence, quality, exclusivity of "club" varieties, and proximity to Asian markets, delivering price premiums.
- Growth in regional trade with Asia, which offers significant transport advantages versus traditional European markets.
- The recognised Seasonal Employer Scheme, which provides sufficient numbers of experienced overseas workers to carry out jobs such as thinning and picking.

Combining these new-found competitive advantages with the sector's traditional strengths, including favourable climate conditions for fruit growing in the Hawke's Bay and Nelson regions, has led to in-market returns that consistently outperform key competitors. Indeed, over the last four years New Zealand's average in-market export prices have been 30% higher than arch rival Chile and nearly 50% greater than South Africa.

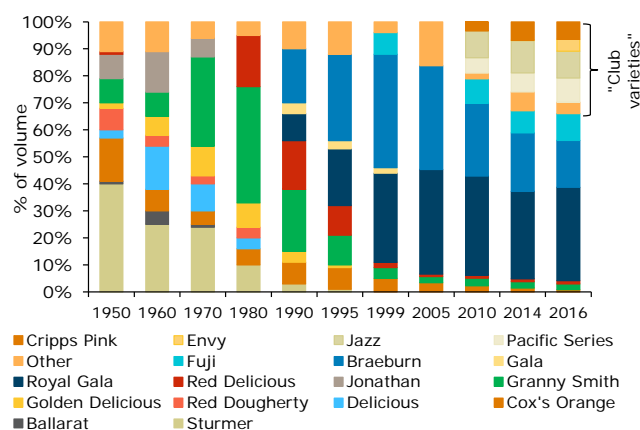
FIGURE 5: AVERAGE EXPORT RETURNS FOR SOUTHERN HEMISPHERE EXPORTERS



Source: ANZ, Comtrade

A big part of this is the shift to 'club' varieties¹ that accounted for 118,000 tonnes, or 34% of New Zealand's export supply in 2016. This proportion is expected to reach 39% of total supply in the current selling season. These 'club' varieties were just 21%; or 55,000 tonnes of export supply back in 2010. If anything, the above in-market margins have widened further in recent years as the supply of 'club' varieties has grown. Further growth is forecast as additional planting takes place, other recently planted orchards start to produce, and new varieties such as 'Dazzle' are introduced.

FIGURE 6: NEW ZEALAND APPLE EXPORTS BY VARIETY

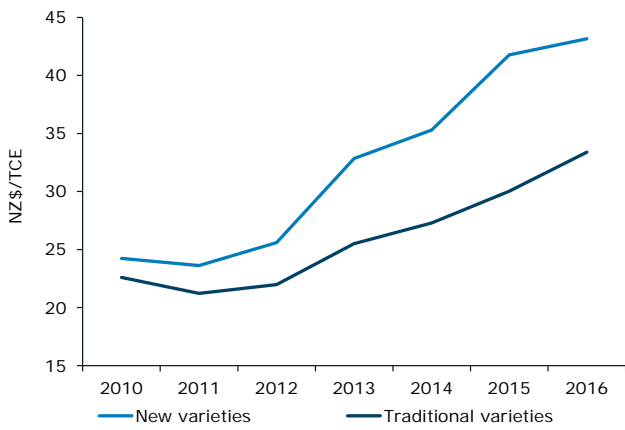


Source: ANZ, Statistics NZ

These new 'club' varieties are trademarked and supply is controlled to meet market demand. They also have eating qualities desired by Asian markets (red colour and sweeter tasting), where consumption growth is highest. This, combined with New Zealand's focus on higher quality standards and ability to meet stringent phytosanitary measures, has created brand presence and exclusivity, delivering FOB export price premiums that are 30% above traditional varieties. They are also higher yielding, which combined with higher prices is very potent in supporting per-hectare revenue.

¹ Club varieties include: Pacific Beauty/Queen/Rose, Jazz, Cripps Pink, Envy and other low volume and new varieties such as Dazzle.

FIGURE 7: EXPORT PRICE PREMIUMS BETWEEN DIFFERENT VARIETIES



Source: ANZ, Statistics NZ

VITICULTURE

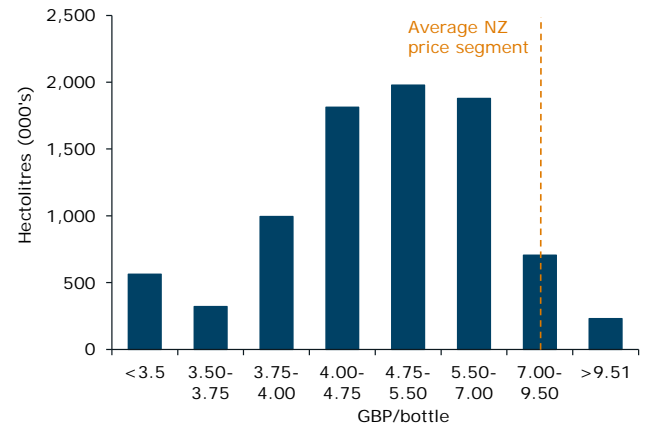
New Zealand’s wine story continues to be primarily about Sauvignon Blanc, with the varietal continuing to win many global accolades. Proximity of New Zealand’s vineyards to the ocean has a pronounced effect on the character of New Zealand’s wines. Mild, sunny summers and marked differences between day and night time temperatures in many regions slow the ripening of the grapes and allow them to develop pure, intense varietal flavours. This is the foundation of New Zealand wines’ elegance and power, and helps explain their famed balance, structure and food friendliness.

Combined with best practice orchard/canopy and winemaking management, brand positioning by exporters, and sustainability efforts, New Zealand wine continues to be positioned in the ‘super premium’ category. This positioning even allows New Zealand to out-compete France in some markets, despite the latter’s much richer wine heritage.

Due to the existence of bulk wine exports that are often bottled and packaged in market under a New Zealand brand, the best price comparison of market positioning is on the supermarket shelf, given that the retail channel accounts for the lion’s share of sales in New Zealand’s top markets. Looking at the three main export markets of Australia, the US and United Kingdom, on average New Zealand wine occupies the premium end of the spectrum in each.

The UK accounted for 30% of New Zealand’s wine exports by volume and 23% of value in 2016/17. Bulk wine exports accounted for 47% of total exports, which was the highest of the big three export destinations. However, this doesn’t appear to have dented the final selling price much, with New Zealand wine’s average retail price in the UK around GBP7.0-7.5/bottle. This places the average New Zealand wine in the top 11% of retail wine sales in the UK by price, where nearly 50% of wine sells for below GBP5/bottle. From a UK importer point of view New Zealand wine is ranked number one by value per litre, even outdoing France.

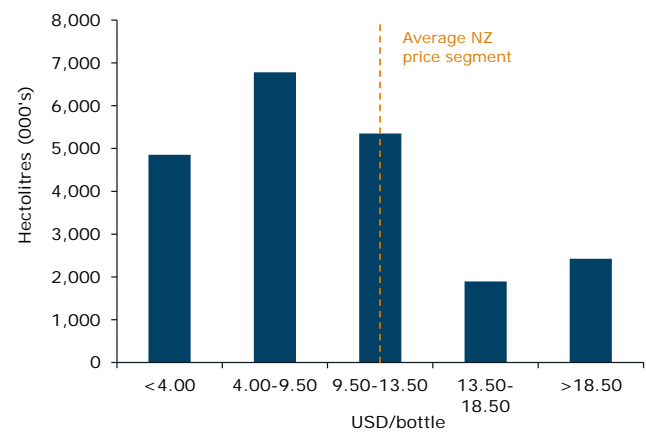
FIGURE 8: UK WINE SALES BY PRICE SEGMENT



Source: ANZ, NZ Winegrowers

The US accounted for 29% of New Zealand’s wine exports by volume and 31% of value in 2016/17. Bulk wine exports accounted for 38% of total exports to the region. New Zealand wine’s average retail price in the US is around USD11-12/bottle, placing it in at least the top half by price of retail wine sales in the US. Nearly 50% of the wine sold in the US retails for less than USD9.5/bottle. From a US importer perspective, New Zealand wine is ranked a narrow second behind France by value per litre, but well ahead of other competitors.

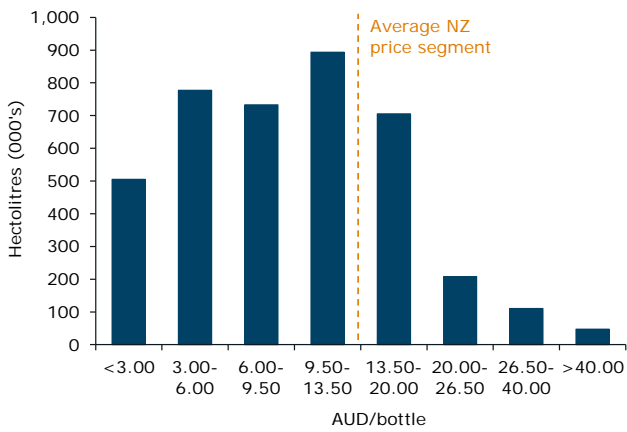
FIGURE 9: US WINE SALES BY PRICE SEGMENT



Source: ANZ, NZ Winegrowers

Australia accounted for 24% of New Zealand’s wine exports by volume and 22% of value in 2016/17. Bulk wine exports accounted for 38% of total exports. New Zealand wine’s average retail price in Australia is around AUD12-13.50/ bottle, placing it again in at least the top half of retail sales in Australia by price. Nearly 50% of the wine sales are below AUD9.5/bottle. From an Australian importer’s view, New Zealand wine is ranked second behind France by value per litre.

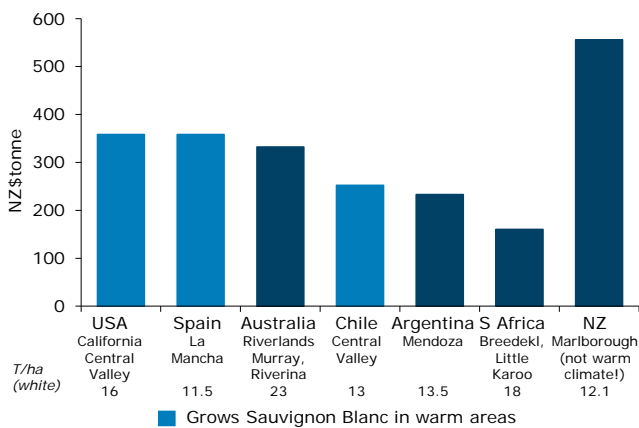
FIGURE 10: AUSTRALIA WINE SALES BY PRICE SEGMENT



Source: ANZ, NZ Winegrowers

So for the three export destinations accounting for 82% of export volumes and 77% of total value, New Zealand wine clearly occupies the premium end of the spectrum.

FIGURE 11: GRAPE COST OF PRODUCTION COMPARISON BY COUNTRY



Source: ANZ, NZ Winegrowers

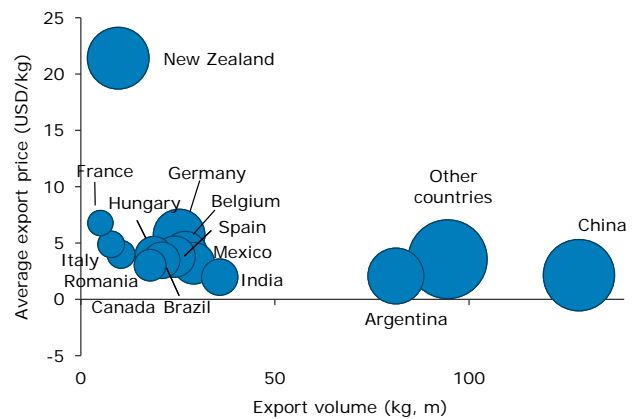
When you look at New Zealand’s grape production costs against a range of competitors, our costs are twice the average, and nearly three and a half times higher than South Africa, one of the lowest-cost grape producers. This means we have a higher break-even for our wine when it lands in its export destination compared with most of our competitors. Therefore, high quality, proprietary-branded packaged wine with a high margin/price focus is an imperative for New Zealand’s competitiveness and bottom lines.

HONEY

The fledgling Manuka honey industry is currently experiencing some growing pains, but nonetheless it already has a good standing versus other competing products – both direct competitors and other honey varietals.

Manuka’s standing in the food & beverage category is such that New Zealand’s average export price (FOB) is USD21/kg, whereas most of the other major honey exporters are earning only USD2-8/kg, and an average of only USD3/kg. Similar price multiples can also be demonstrated for retail honey prices in the main markets.

FIGURE 12: VALUE AND VOLUME COMPARISON OF TOP 20 GLOBAL HONEY EXPORTERS



Source: ANZ, Comtrade

A more valid comparison of New Zealand companies’ Manuka honey price prowess is against Australia’s bush jelly (their Manuka equivalent).

Examining online retail prices in Australasia for different UMF (or equivalent)-rated honey in a 250g container shows a 23% premium at the lowest end. However this widens substantially to above 50% at higher UMF or equivalent rating. This demonstrates New Zealand products have a better brand and market presence than the nearest competing rival product in the retail honey space.

AVERAGE HONEY PRICING BY UMF, OR EQUIVALENT RATING ACROSS TOP AUSTRALASIAN BRANDS (NZ\$/250G)

UMF or equivalent rating	5+	10+	15+	18+	20+
New Zealand brands	23	40	65	117	111
Non-New Zealand brands	19	29	43	50	66
Premium	23%	36%	53%	134%	69%

Source: ANZ, various websites

That said, Manuka honey's uniqueness is its scientifically proven anti-bacterial and anti-inflammatory properties that are different to other types of honey. This opens up a wider variety of end-markets and product categories that are not captured in the above statistics. These product categories range from health, cosmetics and nutraceuticals right through to medical. Within each of these categories there is a range of applications and products such as skincare, sanitisers, healthy snacks, infant formula, throat lozenges, children's cold medicine and elixirs.

The medical category is perhaps the most exciting, especially from a potential returns perspective. Off-the-shelf medical products centre around creams and gels to heal wounds. Medical-grade products are being used in hospitals to heal wounds and skin infections that are nonresponsive to standard treatments, such as bacteria that are resistant to antibiotics.

The available margins for each category are difficult to assess. However, given the price escalation seen above for the different grades of honey, one can make a broad generalisation: there are substantially higher margins for medical products, followed by cosmetics, nutraceuticals/natural health products, and then food/beverage.

This wide spread of applications would appear to offer the prospect of plenty more growth as increasing volumes become available and further product/brand development is undertaken. The Manuka honey industry is one of the fastest-growing export earners and has aspirations to be a \$1 billion earner around 2025.

MERINO WOOL

While the rise and rise of synthetic fibre has hurt coarse-breed wool, the New Zealand Merino Company (NZMC) has managed to carve out a more lucrative niche. Prior to the establishment of the NZMC, wool auctions were the only method for the sale of merino fibre in New Zealand. Essentially sold as a commodity, merino fibre was subject to very significant price volatility.

The company's business model is to transition a significant percentage of merino wool into sales executed via forward contracts. To do this, NZMC markets the superior attributes of New Zealand merino fibre to differentiate it from other products and competitors (such as Australia).

Once end users are convinced of the attributes of the NZMC offering and its other associated benefits, they enter into long-term contracts to ensure supply. The price-points are negotiated between NZMC and its brand partners at a level that allows growers to receive a fair, equitable, and sustainable return for their fibre and manufacturers to be successful over the long term. The price premiums vary by micron. As a result, NZMC growers have greater price stability that allows them to more effectively manage their farms and make important capital investment decisions. In exchange, NZMC's brand partners receive sustainable pricing, guaranteed supply, consistency of supply, traceability, and fit-for-purpose processing consignments.

NZMC has crafted a marketing story that supports a price premium at retail that could be shared among partners across the supply chain. NZMC further supports this price premium by investing heavily in research and development (R&D) and market-development activities that help retailers and brands boost demand for products made with New Zealand Merino wool.

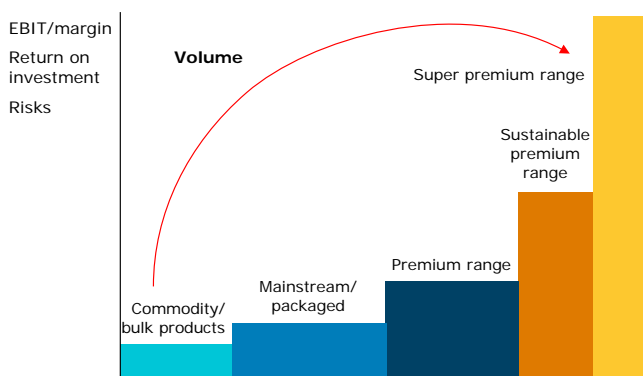
Today, over 70% of the wool sold by NZMC is committed to forward contracts.

THE FAST FOLLOWERS

The next group of examples is classified as the 'fast followers' – many of the initiatives, or examples are still in the 'earlier' stages and a lot of further growth is still expected to occur. Many of them need to be scaled further to make a more meaningful impact on the sector's entire earnings. That said, some of the examples profiled are for New Zealand's larger primary sectors and businesses. If Fonterra's consumer and foodservice business were split out as a separate entity it would be the largest food business in New Zealand by some margin (as measured by revenue turnover).

In many of the examples, the sector or specific business profiled currently produces/processes a large amount of raw material into base products. In many cases the volume of these products is significant in the context of global trade and they are often classified as commodities. In some cases the sharp seasonality in local supply of the raw materials restricts processing or 'value-added' options, but in most cases a conscious effort is being made to extract more value over and above the status quo. This value extraction is generally taking place through a combination of creating new products from the raw materials, changing the marketing mix, shifting supply/new products through different channels (retail, foodservice, e-commerce), forming mutually beneficial partnerships, and brand/packaging innovation.

FIGURE 13: STYLISED MOVEMENT OF MORE PRODUCT BEING SHIFTED TO HIGHER MARGIN CATEGORIES



Source: ANZ

Above is a stylised/generic example of the above philosophy in action, where companies are trying to shift more of their product out of commodity categories and further up the value (or margin) curve. The target products,

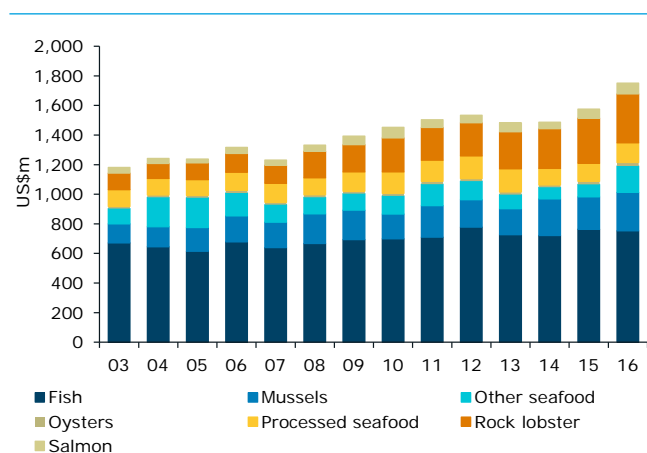
markets and sale channels of the shift are the ones that deliver higher and more stable margins. This, in turn, supports a higher return on investment even though there is often more risk, direct costs and capital required.

The incremental effect of shifting the same amount of volume overall, but with less 'commodity' type product and more 'value-added' is better revenue per unit of output. This lifts earnings with controlled costs, which is either passed back to end consumers to remain competitive, paid out to farmers/growers, and/or boosts shareholder returns in the business, adding extra value. The split of the spoils depends on a sector's ownership structure, supply arrangements and in-market competitive forces.

SEAFOOD

Seafood exports now total \$1.7 billion and have been steadily growing at 3% per year on average since 2007. The sector's export revenue is split between 45% fish, 18% rock lobster, 15% mussels, 5% salmon, 1% oysters and 8% processed seafood. Other seafood products make up the remaining 8%. At each sub-sector there are a number of 'value-added' stories and some new initiatives that hold the promise of more to come.

FIGURE 14: NEW ZEALAND SEAFOOD EXPORTS



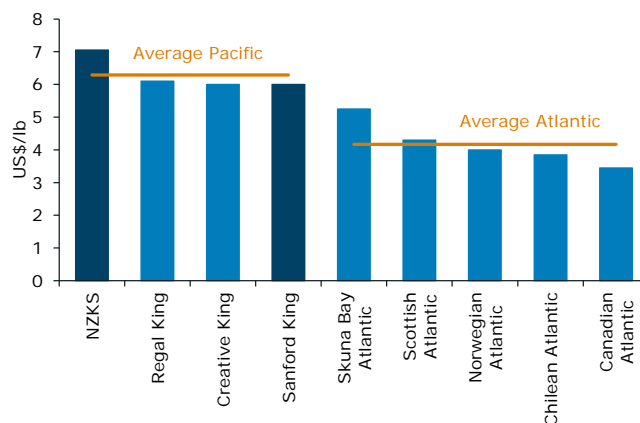
Source: ANZ, Statistics NZ

Salmon

New Zealand's King Salmon is considered the "wagyu" of the salmon world and is sought after around the globe. Roughly half of New Zealand's salmon is consumed domestically, with the rest heading off to export markets such as Japan, Australia, and the US, where it achieves more than a 50% price premium over Atlantic salmon.

Taste, colour, and texture are important attributes when it comes to selling seafood and New Zealand salmon rates highly on all these attributes. However, it has additional benefits with a higher oil content than Atlantic salmon, and New Zealand farms do not use antibiotics, pesticides, growth promoters or vaccines. There is also no concern about heavy metals accumulating in the fish.

FIGURE 15: IN-MARKET SALMON PRICING COMPARISON



Source: ANZ, New Zealand King Salmon, Forsyth Barr

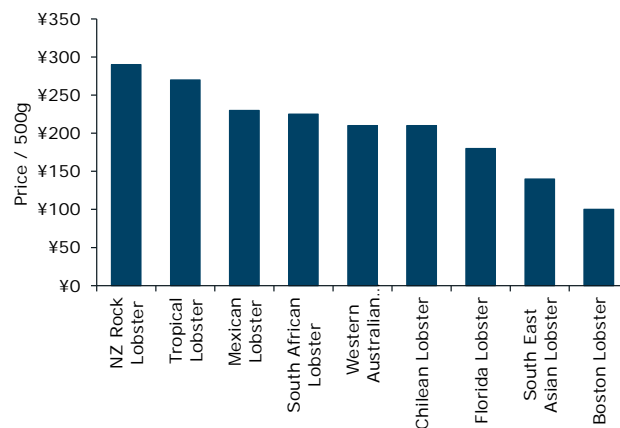
All these attributes, combined with strong brand presence and sustainability practices (New Zealand salmon farming recognised as the world's greenest²), contribute to its premium position and mean it is a highly sought-after product by many top-end retailers and restaurants.

Rock Lobsters

Rock lobster (crayfish) is in a league of its own when it comes to value with an average export price of \$116/kg (FOB) in 2016. This was almost 30 times more valuable than New Zealand's average return per kilogram for fish and 16 times greater than red meat. New Zealand exported 2,813 tonnes to China in 2016; this accounted for 18% of the seafood sector's total export earnings, yet only 1% of seafood export volumes. Comparatively, other lobster species achieved an average export price of \$42/kg, while other crustaceans such as shrimps/prawns and crabs were \$37/kg and \$11/kg respectively.

Comparisons with other competing lobster products (figure 16) shows on average New Zealand achieves a nearly 50% premium versus competing products.

FIGURE 16: IN-MARKET LOBSTER PRICING COMPARISON



Source: ANZ, Rock Lobster Council

² Global Aquaculture Performance Index

The Chinese craze for New Zealand rock lobster – and lobster generally – is driven primarily by its popularity as a luxury item during Chinese New Year and other festive occasions. New Zealand rock lobster receives a premium due to its freshness, quality (airfreighted), specific appearance, colour, natural harvest and sustainability (quota managed), all of which make a number of important cultural connections with the Chinese consumer, supporting the 50% price premium.

Mussels

New Zealand green-lipped mussels generated \$260 million in direct exports last year (15% of total seafood exports) at an average export price of just over \$8/kg. However, a number of companies have started to further process the mussels into oils or powders for natural health and nutraceutical products. While we couldn't find any reliable margins data for such products, capsulated green mussel powder products currently retail for between NZ\$250 to \$700/kg, implying substantially higher margins than as a food product.

Fish - Sanford

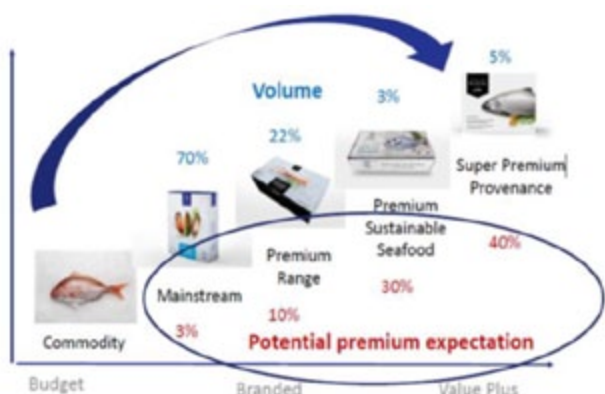
Some of New Zealand's largest seafood companies are looking to take a further step.

Sanford currently holds around 23% of the total fishing quota in New Zealand and has substantial aquaculture interests. They are targeting doubling their earnings of EBIT/kg for fish over the next 4-5 years (from \$0.50 to \$1.00/kg).

Sanford had typically operated under its own name through wholesale terms, selling 90% of its seafood products at commodity pricing with no branding. To grow margins it is in the process of rolling out a branded strategy, including targeted brand tiers:

- Sanford Blue (mainstream, wholesale and retail);
- Sanford Black (premium);
- Tiaki (premium super-sustainable – consumer and foodservice);
- Big Glory Bay (super premium provenance story).

FIGURE 17: SANFORD STRATEGIC TARGETS FOR NEW BRAND INTRODUCTION



Source: Sanford

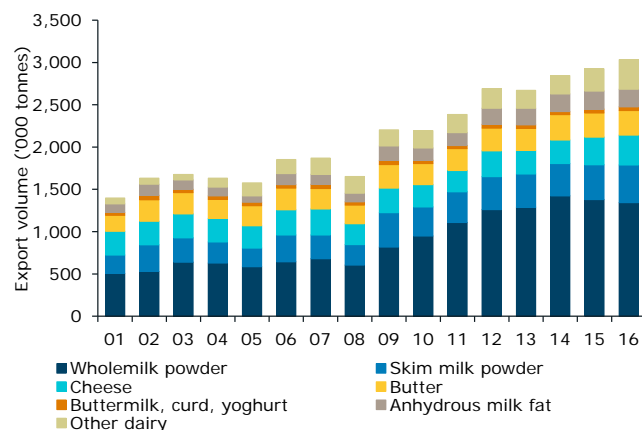
The aspiration is that 60% of total volume is 'value-added' product in the future, and that this contributes to 75% of total revenue, which is also more stable. While the volumes are smaller as one goes along the premium curve, the potential margin step-up to 30-40% for super premium is substantially higher than for mainstream products. Other initiatives to improve earnings include a more targeted end-market strategy through retail and foodservice markets, as well as cost efficiency initiatives.

Sanford have also recently purchased a small nutraceuticals mussel powder manufacturer, and 3-4% of its current supply (approximately 30,000mt) is expected to shift into higher-value powder sales, with options to further expand processing capacity.

DAIRY

Somewhat simplistically, New Zealand's dairy production mix consists of the base products that make up the milk price, namely whole milk powder, skim milk powder, anhydrous milkfat, butter, and buttermilk powder. The most standardised versions of these products are considered the base commodities for dairy. Then there is everything else, including cheese, whey powder, casein, infant formula, whey protein concentrate, lactoferrin etc. Some of these products in their most standardised versions can also be considered base commodities.

FIGURE 18: NEW ZEALAND'S DAIRY EXPORT/ PRODUCTION



Source: ANZ, Statistics NZ

New Zealand's dairy sector has some unique characteristics that make the pursuit of 'value-added' for the entire milk pool challenging.

1. The volume of New Zealand's annual milk production is large in the context of globally traded dairy products, accounting for around 30-35% of supply. This means small changes in milk supply and the specific products produced can have a large impact on prices. It would be impossible to place all of New Zealand's milk into just a few high-returning product categories (i.e. infant formula) because the demand is simply not there and prices/returns would collapse. That means the challenge is more about optimising the long-term returns from

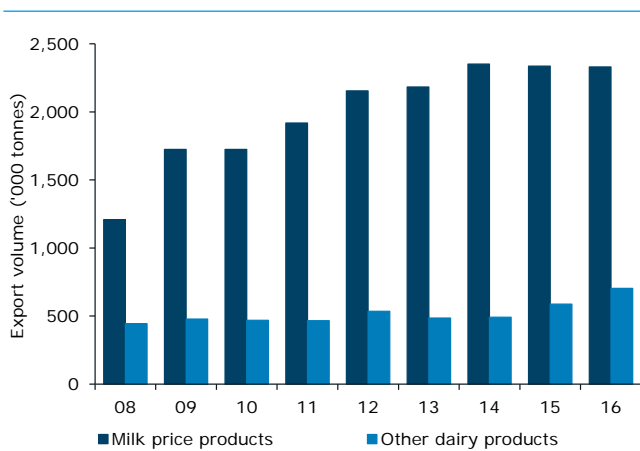
New Zealand's entire milk pool. Therefore a wide variety of products need to be produced and the mix varied from year-to-year to optimise returns according to market signals.

2. New Zealand's milk supply curve is very seasonal due to our production system (i.e. pastoral farming). This means processing a proportion of New Zealand's seasonal peak into milk powder – which extends its shelf life and is fast to process – is always going to be part of the most efficient way to deal with peak seasonal volumes (notwithstanding technological advances extending shelf life, shortening processing time and improving the functionality of certain dairy products). Traditionally milk powder has been the easiest and most efficient way to process, store and transport raw milk long distances. This is important for New Zealand also due to poor cool-chain infrastructure in many emerging importer markets.

That said, two things have begun to take on more importance in the dairy processing sector:

1. Independent milk companies have experienced rapid market-share growth and currently account for around 17-18% of milk processed. Many of these processors have a manufacturing footprint capable of producing specialist/higher-value products. This includes a range of products under the broad product categories of infant formula, speciality nutritional ingredients, foodservice, creams, bionutrients and consumer-ready dairy products.
2. Not to be outdone, Fonterra's business strategy has been to shift more milk into high-returning speciality ingredient, foodservice and consumer-ready products. This has become easier with the Co-operative's overall milk collections having dropped 5% since 2014/15. The immediate growth outlook appears capped with new dairy conversions having slowed to a trickle and continuing competition from other processors.

FIGURE 19: DAIRY SECTOR EXPORT TRENDS

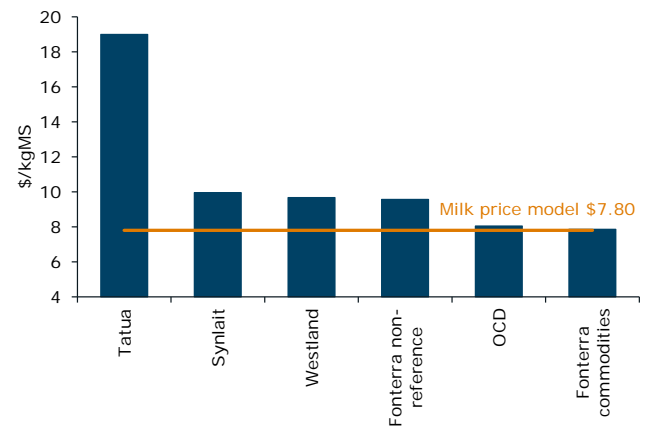


Source: ANZ, Statistics NZ

The collective success of the dairy company's strategies can increasingly be seen at the company and export level. At the collective level, dairy export volumes excluding the core products that determine the milk price have grown 20% per annum since 2014, whereas the volume of the five products that determine the milk price have flat-lined over the same period.

Company-level and specific product category analysis is probably a lot more illuminating given the different cost structures, capital requirements and efficiencies of turning a litre of milk into a specific product. Indeed, the average revenue per milksolid produced by the major dairy companies (shown in figure 20) over the last three years has exceeded the regulated milk price model by \$0.64/kg MS. Or put another way, it generated an additional \$3.5 billion in revenue for the sector. The range reflects the businesses' different strategies and specific product splits between base commodities and higher-value ingredient/consumer products.

FIGURE 20: REVENUE PRODUCED BY DAIRY COMPANY



Source: ANZ, various dairy company financial reports

However, revenue is not the only consideration, as each company has different cost structures and capital footprints to produce its product mix. Benchmarking the fixed assets employed by the major companies shows those who generate higher revenue per milksolid have also employed more capital. In turn, this provides a different picture for return on capital/investment. For example, despite Open Country Dairy generating less revenue per milksolid than the other companies, they operate with a substantially lower capital and cost base. This significantly boosts their return on capital.

FIGURE 21: FIXED ASSETS EMPLOYED BY DAIRY COMPANY



Source: ANZ, various dairy company financial reports

If we had data on actual operating costs, return on capital/investment could be more accurately deduced. A lack of comparable publicly available information makes this difficult. Broadly, the gross margins for the major product groups over the last three years are shown below.

GROSS MARGIN SPLIT BY PRODUCT GROUP

Product Group	Examples products	GM / LME
Reference commodity products	Premium or slightly non-standard WMP, SMP, Butter	~\$0.05
Non-reference products (i.e. not included in milk price calculation)	Bulk Cheese/ Protein Powders	\$0.15-0.20
Foodservice	Mozzarella/ Branded Creams	\$0.20-0.25
Consumer	Branded Products	\$0.40-0.45

Source: ANZ

The gross margin includes the cost of milk and other goods sold. As the export and company level data shows, it is the higher gross margin categories that have started to grow more strongly in recent years. Given the type of capital investment that has occurred in recent years, and is planned in the future, greater growth in the higher-returning products groups such as foodservice and consumer ready products is expected, at the expense of base commodities volumes.

From a Fonterra perspective you can see the ship has turned, with foodservice and consumer products in the first half of the 2016/17 having grown to 21% of total sales. This is well up on several years ago, where this product group was only 18% of total sales. Non-reference dairy products have also grown to 26% of total ingredient sales. This is up on several years ago when these products accounted for 21% of total sales.

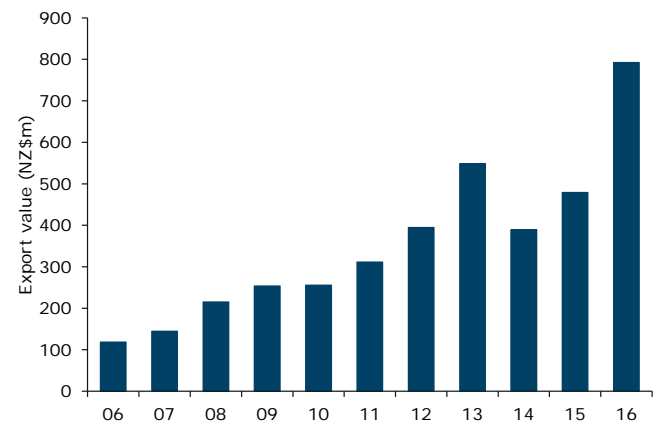
These volumes can vary, as Fonterra has improved its processing flexibility to take advantage of relative price signals. This flexibility ranges from 20% to 45% for the non-reference product groups. The long-term goal is to move more milk into higher-returning non-reference products, but this takes both time and capital.

Another sign of increasing sophistication and searching out higher margins/returns is the growth in finished infant formula product exported from New Zealand. Infant formula is one of the more complex foods as it is designed to mimic human breast milk. It sits on the dividing line between food and pharmaceuticals.

Traditionally New Zealand has been a key supplier of the base milk powder that other companies have used to manufacture infant formula (and indeed it still is).

More recently, the various dairy companies have moved more into producing bulk base infant formula, contract packing retail product for other companies, and manufacturing own company brands. This has been demonstrated by finished infant formula export earnings growing 40% per year since 2010.

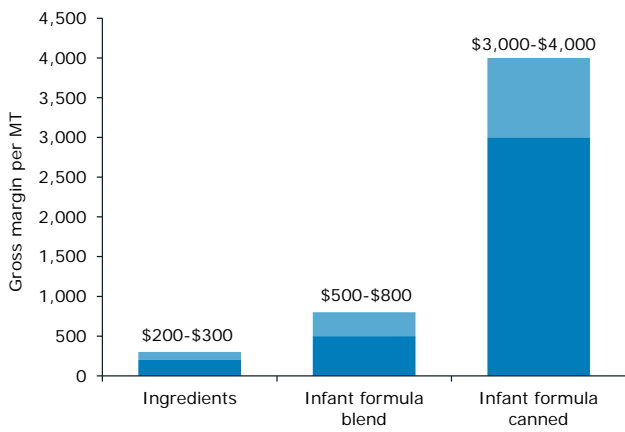
FIGURE 22: FINISHED INFANT FORMULA EXPORTS



Source: ANZ, Statistics NZ

Figure 23 shows the step-up in gross margins associated with taking milk from ingredients through to fully-blended infant formula and canned infant formula. While there are higher capital costs, greater processing complexities and higher testing/quality standards as you move along the production process, the step-up in gross margins from ingredients to fully blended and canned product is significant. This more than compensates for the higher capital and direct costs of each stage, if the strategy is well executed.

FIGURE 23: GROSS MARGINS FOR DIFFERENT STAGES OF INFANT FORMULA PRODUCTION



Source: ANZ

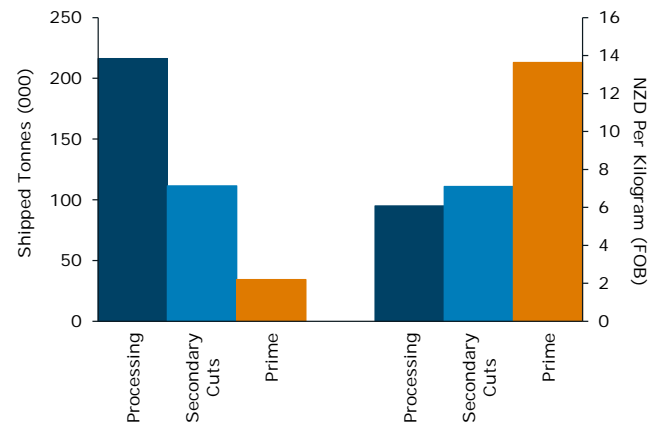
RED MEAT

The opportunities for the red meat sector are similar to those outlined earlier for Sanford, but this sector faces some of the same constraints as dairy: seasonal supply, access to capital, type of supply and being a large supplier for certain markets/product categories. Nonetheless many of the companies are undertaking a range of new initiatives to try to extract higher returns from the marketplace.

Broadly, New Zealand meat production has been tracking downward over the last 10 years. Sheepmeat and venison production has declined and beef production has fluctuated according to dairy cow turn-off.

Of exported beef production, 59% is destined for processing/manufacturing product, 31% for a range of secondary cuts and 10% for prime cuts. Including domestic sales would show a higher prime-cut proportion. The export revenue per kilogram is more than 2 times greater for prime versus manufactured product. However, there are limitations on how much of a cattle carcass can be turned into each type of product. New Zealand's beef supply is also heavily weighted toward the dairy herd. In fact, of New Zealand's current production, nearly 70% is estimated to be of dairy origin and the remaining 30% traditional beef breeds. Of this, dairy farmers account for around 40% of direct supply, much of which needs to be processed in a very short period. The remainder is from red meat farms, of which approximately half is dairy origin (bulls) and the other half traditional beef breeds.

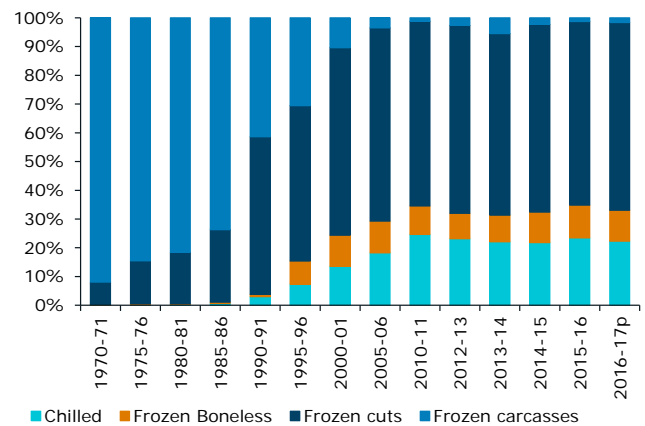
FIGURE 24: BREAKDOWN OF BEEF EXPORTS BY CUT AND VALUE



Source: ANZ, Beef + Lamb New Zealand

For a lamb/mutton carcass it's a similar story to beef regarding the different types of cuts that can be produced, but different in terms of there being a single source. From a long-term perspective the industry has moved well away from frozen carcasses into frozen and chilled cuts. The margin improvement moving from frozen to chilled cuts for the same specifications tends to be in the range 10% to 15%.

FIGURE 25: BREAKDOWN OF LAMB EXPORTS BY CUT



Source: ANZ, Beef + Lamb New Zealand

While it is difficult to extract exact numbers and company specifics for some of the initiatives individual meat companies are currently engaged in, the collective effort looks to be gaining more momentum around some key initiatives. These include:

1. Targeting of sales through new foodservice and e-commerce channels in certain markets.
2. Chilled meat export access to China opening up and currently being tested (long-term opportunity).

3. More own-brand chilled product being produced, with market price points generally 2-3 times greater than traditional supply formats. The reach of these is being expanded with, for example, Silver Fern Farms rolling out its branded chilled product range into Germany, North America and China. Many other companies either have established brands, or have just rolled out new ones. The race is on.
4. New and revamped strategic partnerships have been formed in key markets to improve the channel to market, creating dual branding opportunities for chilled products, and providing new capital to speed up key initiatives.
5. A range of initiatives aim to make more from co-products and rendered product. This includes petfood, blood recoveries, using bone for edible products, and pharmaceuticals. Margins on these products can range up to 3 times what is normally achieved (and even more when you start talking pharmaceuticals).
6. Shortening the supply chain through application of new technology, partnerships and capital investment (i.e. reducing/eliminating other supply chain intermediaries' margins).

Some of the additional key barriers to doing more in the 'value-added' space include high tariff rates and other non-tariff barriers in certain products/countries; distribution and logistic support to end market; shelf-life restrictions for chilled; shipping time to market; consumer education (i.e. how to cook and use); and domestic support for local products. But many of these may be circumvented through improved market access and new/revamped partnerships. Some of this stuff isn't new, but much of it is becoming more aggressively targeted, especially by some of the larger meat companies, providing scale.

FORESTRY

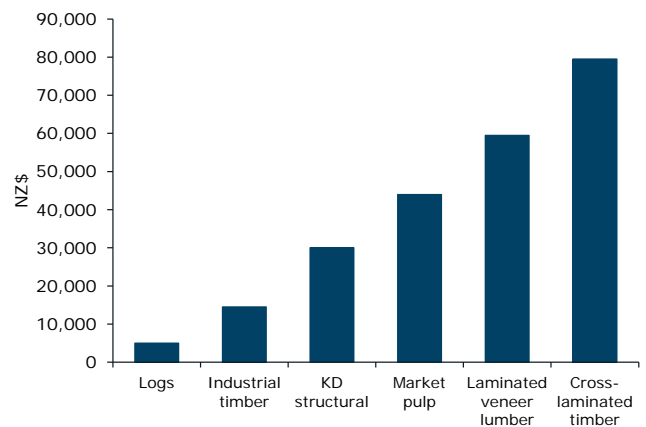
The forestry sector is another one to watch with plenty of opportunities to turn harvested logs into a range of 'value-added' products.

As wood supply has increased since 2012 the proportion directly exported as logs has increased toward 55% of the total harvest. The remaining 45% is further processed in New Zealand into a range of products for both domestic use and export.

Overall, local processing capacity appears to have increased slightly in recent years, albeit with some natural churn occurring. Of the product processed locally, around 26% is pulp, 6% reconstituted panels, 3% poles and 2% wood chips.

The remaining 62% is saw or peeler logs. Of this, around 14-15% is processed into plywood products and the remainder is destined for sawmills to make sawn lumber, panels, laminated products and mouldings. The sawmill residues are also fed back into pulp and reconstituted panel production, as well as being used as an energy source.

FIGURE 26: VALUE OF DIFFERENT WOOD PRODUCTS IN 40 FT CONTAINER



Source: ANZ, Beef + Lamb New Zealand

Figure 26 shows there is a significant step-up in the revenue extracted from turning logs into structural timber, laminated veneer lumber and cross-laminated timber. In order to extract more value from the 55% of logs that are currently exported there is a requirement for the industry to invest much more in new technology and plant/equipment.

New investment is currently constrained by intense competition for logs from offshore processors/markets and the fact many competitors are heavily protected by non GATT/WTO-compliant subsidies and other non-tariff barriers. This places somewhat of a 'double squeeze' on the sector's ability to invest to extract more revenue from the 55% of New Zealand's logs that are exported, but the potential is there.

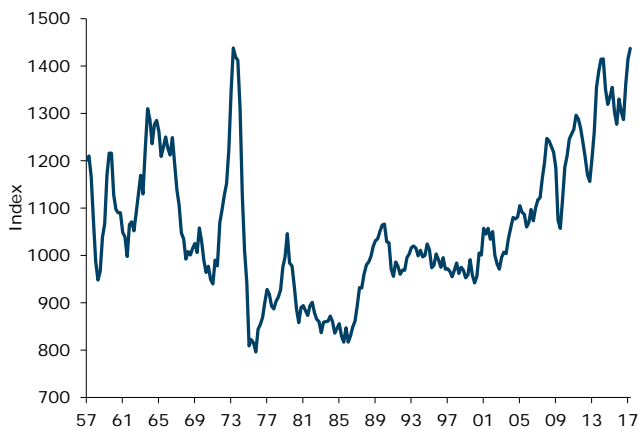
CONCLUDING REMARKS

While many still lament the primary sector's lack of 'value-added', there is a range of evidence that suggests such a view is somewhat outdated. There are numerous examples at a sector and individual company level that show that New Zealand is performing well versus both key competitors and the status quo (or base commodity pricing within a sector).

We believe these efforts are a big part of New Zealand's current terms of trade boom, which has surged to the highest level since the wool-induced spike of the 1970s. A clear secular trend upwards is notable over the past twenty years. The emergence of manufactured and technological products as the new "commodities" has helped (we import those), but the aforementioned examples of adding value have helped too.

Strong terms of trade add to New Zealand's purchasing power. The lift also feels more sustainable than historically has been the case. Not only is the increase spread over a range of products, but also it is partly due to the unique intellectual property and brand investment that is being built on a number of fronts across the various primary sectors and companies.

FIGURE 27: NEW ZEALAND'S TERMS OF TRADE



Source: ANZ, Statistics NZ

Yet there is still plenty of scope for more 'value-added' in most cases. The majority of the leaders we identified have strong growth pipelines for the next 3-5 years. In most cases the fast followers have only just more seriously embarked on a journey focusing on 'value-added'. By 'serious' we mean that the 'value-added' strategies that have been talked about in recent years are seeing more investment and focus, which is now starting to flow through to earnings (and asset valuations) in a more meaningful ways.

Make no mistake – there is still a long way to go for many, but the journey appears to have certainty begun and there is plenty of room for further growth. The journey won't be without its ups and downs. There are a number of potential risks, and many barriers to still be navigated. The competition never sleeps and consumers can be a fickle bunch. But it just has that feeling about it: the talking is turning into more serious action and results in the form of dollars earned.

In the case of the leaders, today's 'value-added' was initiated a decade ago via research & development activities, protection of unique intellectual property, investment in key areas of product development (i.e. brand, packaging etc), changing management practices across the supply chain and a commitment to redefining their business. Microeconomic (firm and individual) decisions taken years ago are now manifesting in today's macroeconomic statistics. The primary sectors and the major companies within it haven't been standing still for the past few years, so the 'pipeline' for further value creation looks pretty good.

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