WHAT IS NEW ZEALAND'S COMPETITIVE ADVANTAGE – EFFICIENT FARMING OR DELIVERING CUSTOMER VALUE?

Nic Lees

Rise and decline of farming prospects

For most of the last century New Zealand led the world in efficient production of agricultural products. This began in the late 1800s with exports of wool, meat and dairy products, and relied on a competitive advantage based on this country's unique resources and capabilities. The availability of low cost land with a small population enabled New Zealand to produce a large food surplus for export to the world. A temperate maritime climate, freedom from animal and plant diseases, skilled and innovative farmers, combined with investment in farm management research enabled this country to out-compete local producers in nearly every market it had access to. By the 1950s, New Zealand had one of the highest standards of living in the world.

This comfortable existence was shaken by the rise of agricultural protectionism and support mechanisms in the 1970s. New Zealand was shut out from traditional markets and needed to compete with subsidised exports that drove down international commodity prices. This began a long decline in agriculture highlighted by Prime Minister David Lange's famous statement that, 'Agriculture in New Zealand is a sunset industry and manufacturing and tourism will take over.' A generation of farmers' children were told, 'Whatever you do don't go farming; you will never make money, get a degree in commerce or computing.'

Despite significant attempts to diversify, the economy has remained highly dependent on agri-food exports. New Zealand is unique among the world's developed economies, with nearly two-thirds of exports coming from the agricultural sector. Denmark and the Netherlands are the nearest comparable developed economies with significant agricultural export sectors, yet their agricultural exports represent only about 20 per cent of their total exports. Fortunately for New Zealand the demand for our agricultural products is increasing. The rapid urbanisation and economic growth in Asia has seen unprecedented growth in a middle class that is driving demand for our meat and dairy products, as shown in Figure 1.

Edge of a new golden era

New Zealand may be on the edge of a new golden era in agriculture, with the Asia Pacific middle class expected to grow from the current population of fewer than one billion to more than three billion by 2030 according to OECD data. New Zealand is emerging as one of the first economies to reach significant growth following the global financial crisis of 2009. Already it is outperforming all but four of the world's advanced economies, with a growth rate expected to increase to 2.9 per cent next year according to the International Monetary Fund. This will be exceeded only by Israel, Singapore, Hong Kong, South Korea and Taiwan. It is expected that in 2014 New Zealand will outperform the average advanced economies by 2.0 cent.

This exceptional growth is driven by record prices for dairy products. International whole milk powder prices have exceeded US$5,000 per tonne, as shown in Figure 2. As a result Fonterra is forecasting a payout, including dividends, of NZ$8.62 kilograms of milk solids for the June 2013 to May 2014 season.

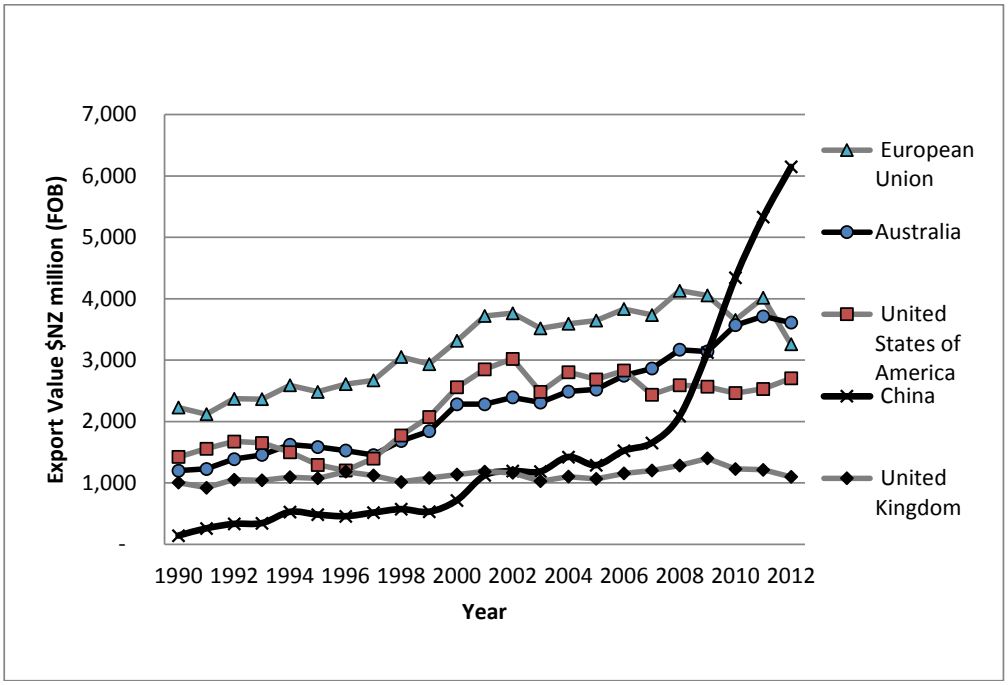

Figure 1: New Zealand's primary product exports. Source: Statistics NZ

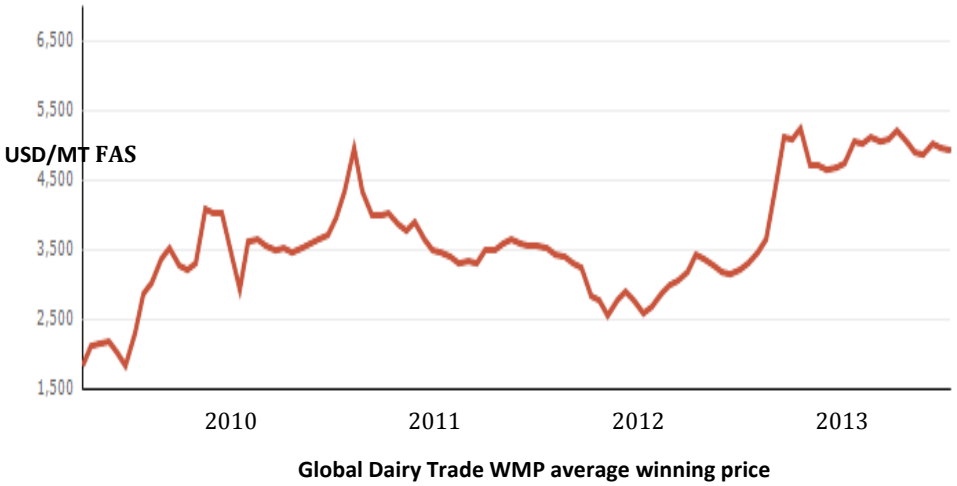

Figure 2: International whole milk prices. Source: GlobalDairyTrade

Sustainable long-term prosperity

While this is good news, it also presents a significant challenge. How can New Zealand turn this period of high agricultural commodity prices into sustainable long-term prosperity? This country potentially risks becoming dependent on China in the same way it was on Great Britain for most of the 20th century. Once again we may become vulnerable to volatile international commodity prices and changes in foreign countries' agricultural policies.

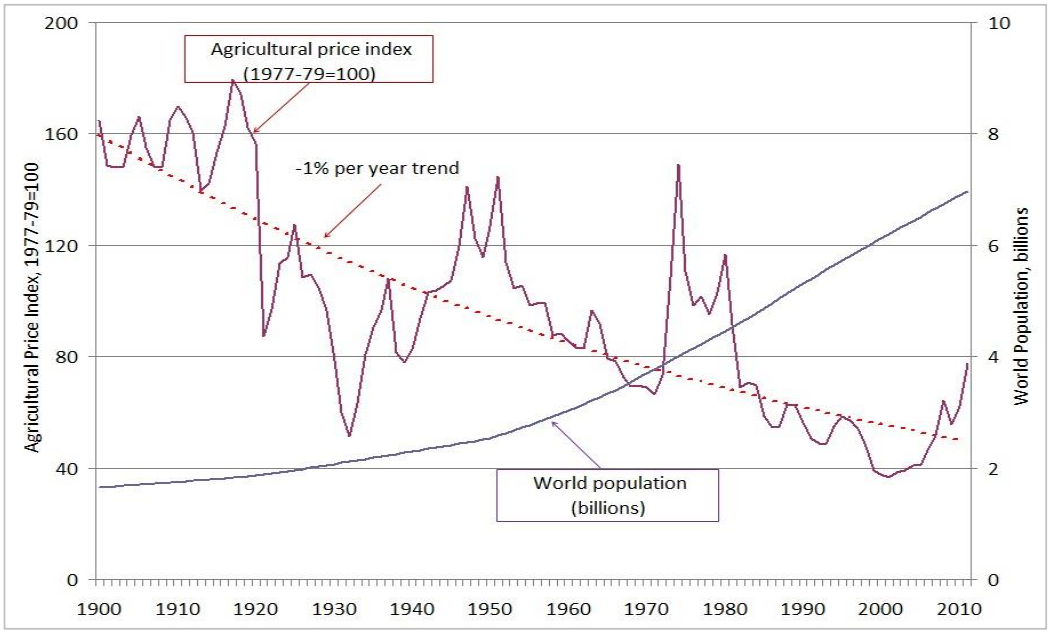

Figure 3: Long-term agricultural commodity price trend. Source: Fuglie and Wang 2013

There have been many cycles of international agricultural commodity prices, as shown in Figure 3. At some point high prices stimulate increases in production and then, inevitably, growth in demand declines. In the long term there is a consistent decline in price of about 1.0 per cent per year, as shown in Figure 3. To hand on a sustainable prosperous economy to the next generation, New Zealand must do something different.

There are other significant challenges that must also be addressed. The dairy sector in this country is severely indebted, carrying 65 per cent of the total agricultural sector debt of more than $50 billion. One-third of dairy farms are carrying two-thirds of this debt. These highly indebted farmers have less than 50 per cent equity and some have as low as 10 per cent. These farmers are highly vulnerable to the inevitable rise in interest rates. Each one percentage point rise in the official cash rate adds $50,000 a year in interest costs to these heavily indebted dairy farms. The Reserve Bank has recently warned that dairy debt is more of a risk than before 2008 and that 64 per cent of in-debt farms would be losing money at a NZ$5 per kilogram payout. The current model relies on high commodity prices continuing.

Environmental issues

Another challenge is mounting public concern about the impact on the environment from intensive farming practices. This is leading to the introduction of nutrient limits that may require lower stocking rates and reduced fertiliser applications, potentially reducing

production and profitability. The 2013 Ministry for the Environment's report on the state of New Zealand's rivers shows that over 25 per cent of sites monitored have rising nitrate concentrations.

Environment Canterbury figures show the impacts on groundwater, with nitrate levels increasing in about 30 per cent of wells tested and many exceeding drinking water standards. The November 2013 report by Dr Jan Wright, the Parliamentary Commissioner for the Environment, concluded that there was a clear link between expanding dairy farming and deteriorating water quality. She stated that even with best practice mitigation, the large-scale conversion of more land to dairy farming will generally result in more degradation of fresh water.

The vulnerability of New Zealand's reputation was highlighted with recent food safety issues. In January 2013, the *Wall Street Journal* published an article with the headline 'Is New Zealand Milk Safe to Drink' following the announcement that low levels of the chemical dicyandiamide had been found in New Zealand dairy products. This was followed in August 2013 by the false botulism scare and in January 2014 by contamination of E. coli bacteria in fresh cream. These scares have significantly damaged our 100 per cent pure clean green image.

Falling cost competitiveness

These challenges are further compounded by the fact that New Zealand is rapidly losing its competitive advantage as a low cost producer of agricultural products. Argentina, Chile, Peru, Indonesia, Pakistan, and several countries in central Africa, all produce milk at a lower cost than here. The cost of milk production in in this country is now similar to South Africa, India and Eastern European countries, as shown in Figure 4. New Zealand has also lost its advantage of low cost land as it now has some of the highest land prices in the world.

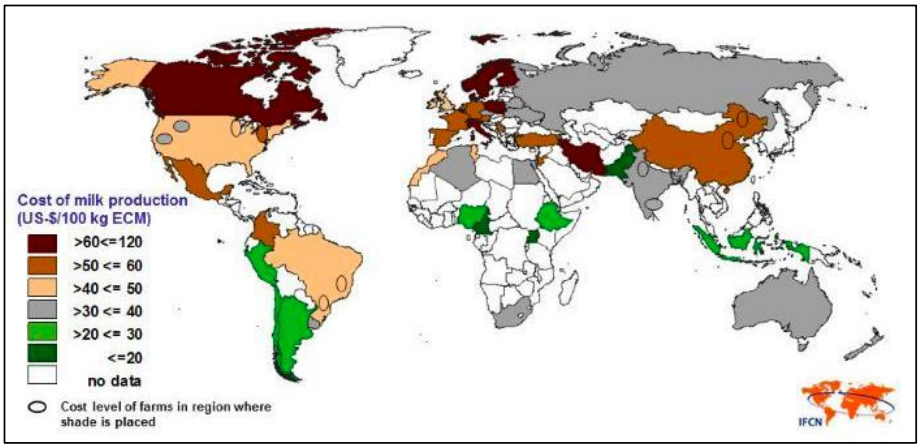

Figure 4: Cost of milk production 2011 – average-sized farms. Source: International Milk Comparison Network

All this leads to a fundamental question. What is New Zealand's future long-term competitive advantage in agriculture? For over a century farmers in this country have focused on pushing up productivity through higher stocking rates, improved animal genetics, use of fertilisers, irrigation, improved nutrition and other technologies. These have all been aimed at improving efficiency and outputs. The potential to maintain these gains has become limited as environmental impacts place constraints on future intensification. High land and labour costs also push up production costs and make increases in scale more costly.

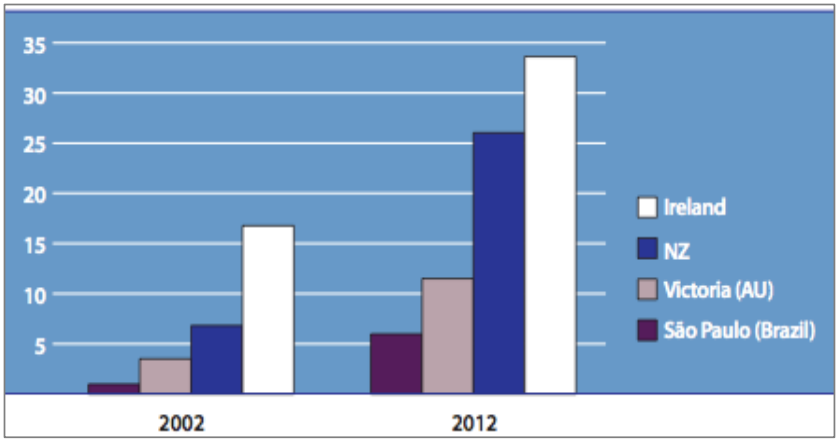

Figure 5: Dairy land prices in selected pasture-based countries, 2002 and 2012 – USD (thousands) per hectare. Source: Rabobank

Alternative to present model

There is an alternative to the present model. Instead of continually chasing higher production per unit of input, the emphasis can instead be on increasing the value of the product. This requires a fundamental shift in the focus of agriculture in New Zealand. Instead of an emphasis on farm production, the focus is on selected consumers and their needs. These consumers are demanding greater variety and quality in the food they eat. They require a consistent year-round supply of high quality safe food. They also want food that aligns with their own personal values which includes, for example, environmental sustainability, animal welfare and fair trade, as well as local and organic production.

Delivering to these customers needs more than an adaptation of the existing system. It requires a new model that moves beyond efficient production systems to provide higher value products to selected premium customers. New Zealand requires only about 30 to 40 million selected high value customers for its agricultural production, which represents less than 0.5 per cent of the world's population.

The first task is identifying these high value customers and understanding what is important to them. When New Zealand primarily exported its products to Europe it faced the barrier of the large geographical distance but benefited from close cultural links. The Asian markets are significantly closer geographically but this is exchanged for a larger cultural distance. These customers are typically young, urban and Asian.

Few New Zealanders speak Asian languages, let alone understand the culture and concerns of these customers. There is a belief that these customers do not value attributes such as environmental sustainability, animal welfare and food safety as much as European consumers do. However recent research by the Lincoln Agribusiness and Economics Research Unit showed that these attributes are more important in China and India, and they are willing to pay a greater premium than European customers for this.

Once these customers are identified, the next step is to develop innovative production systems that can deliver a consistent year-round supply of high quality safe food that addresses their concerns for animal welfare and environmental stewardship. This is not easy within the constraints of a seasonal pasture-based system. New Zealand has traditionally targeted research investment to maximise the production of meat, wool or milk per kilogram of grass. There also needs to be research into systems for maximising long-term customer value per kilo of grass. Investment in market innovation and knowledge about how to communicate with customers is also required.

Value creation

Creating value requires moving beyond meeting minimum standards for sustainability, animal welfare and food safety to leading the market in these standards. These issues need no longer be seen as compliance issues but as providing a valuable competitive advantage. Value creation also involves building collaborative supply chain partnerships beyond the farm gate with distribution channels that give access to these selected customers. There needs to be long-term co-investment in market development with these partners.

This is difficult for many companies as most farmers want to see any premiums achieved in the market captured and paid back through the farm gate price, which limits their funds for long-term market development. There are already some companies attempting to move in this direction, for example, Zespri, Merino New Zealand, Synlait Milk, Westland Milk Products, ANZCO Foods, Silver Fern Farms and Firstlight Foods. However the majority of New Zealand agricultural exports remain in 25 kilogram brown paper bags, as shown in Figure 6.

Figure 6: 25 kilogram export bags of milk powder

Developing this new model will be hard work and take time and capital. It needs a long-term perspective, and a willingness to take risks and accept that some things will fail. It also requires sacrificing short-term gain for long-term profitability. When there are high agricultural prices it is always easier to be a commodity seller. This will not, however, provide the long-term sustainable prosperity for New Zealand that we desire. Only the future will tell if we have learnt from past mistakes.

Nic Lees is a Senior Lecturer in Agribusiness Management at Lincoln University. He is currently involved in a Ministry of Business Innovation and Employment research project entitled 'Maximising Export Returns for New Zealand's Biological Industries'.