

Lesson 7: The rise of dairy: Economic Factors

This is an amazing online resource https://www.global-rural.org/story_map/deconstructing-the-new-zealand-dairy-boom/ and worth reading before teaching this lesson. Teaching notes are also provided.

Starter	Get the class to signal with thumbs/thumbs down about how they feel about dairy, then how dairy is features in the media . In small groups get students to google “dairy farming” “New Zealand” and get them to write down 5 headlines they think are important.
Teach + Activity.	<p>Continue using the PowerPoint Presentation “L7_The economics and markets of dairy”.</p> <p>Note: Students will need a world map outline, access to colour pencils and an Atlas (or digital device).</p> <p>Part 1: Economic Factors This gets students to think about the economic factors that work for and against New Zealand’s dairy production. Refer to the “L7_Teacher Notes” for an explanation about each point.</p> <p>Part 2: Export Value Get students to look at the value of milk products sold to each region and get them to list regions from largest volume sold to smallest volume sold.</p> <p>Classroom discussion questions:</p> <ul style="list-style-type: none">• China is our biggest market, what could be the risk in depending on one market?• Look at the title. Does this map capture all dairy products we export? <p>Part 3: Export Markets Characteristics Fonterra is our largest dairy producer and a significant exporter. They have a number of brands that they export under. Students will watch a series of advertisements from specific countries/markets and create a summary.</p> <p><i>You may want to write the following on the board and either go through the answers as you go or do it at the end.</i></p> <p>Their summaries should include the following...</p> <ul style="list-style-type: none">• Target market (young children, older children, mums, dads, working age adults, older people).• What idea is the ad trying to communicate? (sometimes it can just be a fun, but memorable ad).• How have they done this? (images, statistics, language).

	<p><i>Refer to the “Adverts” below to get a brief overview of what each one is about.</i></p> <p>After watching all the films, students discuss and answer the following questions...</p> <p>Q1: What are some of the similarities that most adverts used to make their milk distinctive (stand out)?</p> <p>Q2: What were some of the differences between markets?</p> <p>Q3: Fonterra either owns or has a financial stake in each of the companies. Why do you think Fonterra uses different brands?</p>
Close	Class feedback on which adverts they remembered best.



Part 1: Economic Factors

Economic factors that work **for** and **against** New Zealand Dairy Production.

For

Environment: Due to our environmental conditions and topography we can produce a lot of grass (which is the cheapest type of feed) and produce a lot of milk. We also don't have a large population so there is still a lot of farm land (although that is coming under pressure of sub-divisions and city expansion).

Genetics: New Zealand has very high producing cows that are good at converting feed into milk which allows us to produce a lot of milk.

Co-ops (Co-operation model): To own Fonterra shares you need to own a farm and be supplying milk to Fonterra. You get a paid (pay out) for the litres of milk provided but you also get a dividend from the shares you own (which is relational to the amount of milk you can provide). This means that profits are shared and distributed throughout New Zealand and it cannot be owned by foreign co-corporations.

Environmental footprint: Compared to overseas systems New Zealand has a smaller environmental footprint because we use a pasture based system which is also seen to increase the quality of milk. There are also stricter animal welfare requirements and environmental requirements around dairy farming.

Against

Distance: New Zealand is at the bottom of the world, so shipping costs play a big part in the cost of production. Milk powder is the dried version of milk so we can ship a lot more in this form but it is not considered a 'high value' product. It also adds significantly to our carbon miles and emissions which is not good in a sustainable food environment. However, being a small nation surrounded by water makes it easy to transport goods across New Zealand and access factories and ports.

Commodities market: These products tend to go into other higher value products. Often the profits depend on the global dairy market price. This means that world events (and weather) have a big impact on the supply of dairy products. The price that farmers receive can fluctuate greatly from \$8/ MS (milk solid) to \$4.50/MS (extremely low). A low input farm will be producing milk solids around the \$4.50/ MS but many dairy farms have a higher cost of production (\$5.50/MS).

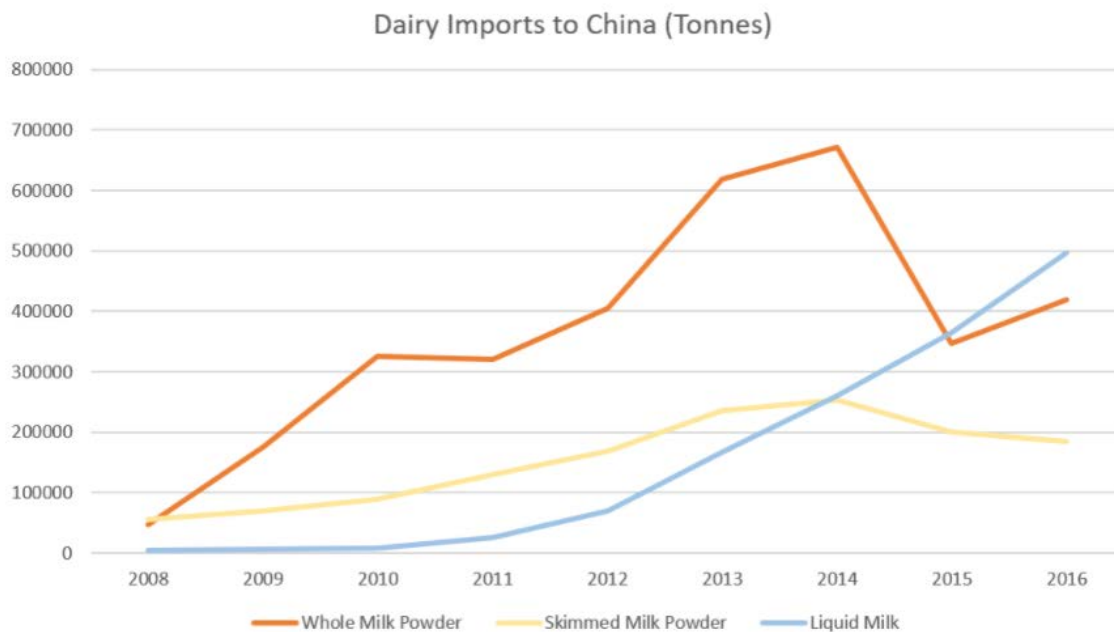
Lack of Experts/ Labour: More people now live in the urban environment than in the rural. This has helped lead to a lack of people entering into the industry because they don't know about the career opportunities. **Refer to slide 4 of the presentation.** There is a high demand for labour for physical on-farm careers and support people (AI technicians) but also for experts like farm advisors, accountants and scientists.



Milk powder lasts a long time: this can be beneficial as it gives milk a longer shelf life. However, some countries/ companies will bulk buy when the price is low and store the milk powder. This means a drop in demand that can lower prices for an extended period of time.

Majority of exports to China: The significance of milk powder exports to China for the New Zealand dairy industry is particularly problematic, making the industry vulnerable to changes in the Chinese economy and consumer culture.

In 2015, imports of milk powder by China fell for the first time and continued to slide over the next couple of years. Most immediately, this was due to stock-piling in China that reduced demand for new imports, but it also reflected a broader shift in consumer taste. Whilst demand for milk powder fell, imports of liquid milk to China continued to rise, nearly doubling between 2014 and 2016.



Source: https://www.global-rural.org/story_map/deconstructing-the-new-zealand-dairy-boom/

Environmental footprint: Practically in western markets there is a growing demand for sustainable products, nutritious products and animal welfare. Compared to some overseas systems the environmental impact is less due to using a pasture based system. Dairying does have areas that they need to improve in (methane, leaching/ waterways, water use, bobby calves) and work is underway with research, industry and council to make this happen.

Environment: With the increased extremes in weather caused by global change there is increased uncertainty and risk for farmers. If it is too hot or too cold there can easily become a lack of food and they need to feed their stock. In these circumstances the price of buying in feed rises and so does the price of production. If there is not enough feed then farmers do have the option of going down to one-a-day milking or drying off (stop milking) their cows which affects the amount of milk they produce over a season.

Wet weather and hot weather also has implications to animal welfare as there can be increased disease and foot problems in wet weather and heat stress in hot weather.

Floods or droughts also has a huge impact on the farming environment over the long term and it can take a year or a few years for the land to produce as much grass as it did even with farmer mitigation.

Part 3: Export Markets Characteristics

After watching all the films, students discuss and answer the following questions...

Q1: What are some of the similarities that most adverts used to make their milk stand out?

Clean green, pasture based systems implies the milk is healthier and of higher quality. Certification, testing and secure production lines ensure a quality product that has the ingredients stated on the label. A lot of ads featured children and are marketed at mothers as they are still seen as the primary carer and makes most of the supermarket/ food decisions.

Q2: What were some of the differences between markets?

English based markets had humorous ads and a greater focus on the cows rather than the environment which was a focus of Asian markets.

Australia marketed directly to children by using the Wiggles. This could indicate that children may have a larger impact on what goes into the shopping trolley or using value added products as a reward rather than the strong focus on nutrition.

Q3: Fonterra either owns or has a financial stake in each of the companies. Why do you think Fonterra uses different brands?

In a small market it can give the illusion of consumer choice. It also allows price differences to maximise profit. Different brands are targeted at different markets so it allows access to all markets.

Adverts Overview

India: Count how many times they mention the words “test” and “safety”.

Philippines and Malaysia: Decided to change their marketing approach in 2017 because milk was seen as an old persons drink.

- In Malaysia, Fonterra commands 76 percent share of the adult milk category through its Anlene brand, and 80 percent share for prenatal dairy products with Anmum
- Fonterra is also the largest dairy company in Sri Lanka, with a market share of close to 50 percent. Across Asia, there are currently 2,500 employees in 15 countries.
- In other developing markets such as Vietnam, dairy consumption grew from less than 1kg per capita per year in the early 1990s to almost 10kg at the start of this decade.

Market profile = <https://www.brandinginasia.com/got-milk-whatever-says-new-campaign-anlene-via-bbdo/>

England: animals and humour used. Older advert link to 1990 advert on PowerPoint. Still uses cows and humour but also highlights pasture based dairy.

Saudi Arabia: emphasis on nutrition.

Chile: Mostly high value products so milkshakes, kids lunch boxes, puddings. A focus on kids and family. There is also a range of zero lactose products not available in New Zealand (we only really have lactose free milk).

Australia: Targeted at very young children. It features the Wiggles and it is an ear-bug of a tune.

New Zealand: Cow based, emotive adverts. Light proof containers also created a value added product.