

# Worksheet: THE EFFECT OF THE DAIRY INDUSTRY ON THE ECONOMY

This worksheet focuses on the dairy industry and its effect on the New Zealand economy. It covers the following topics/skill areas: trade, aggregate supply and demand, inflation, growth and government intervention. This worksheet is relevant to Achievement Standards 90795 (L2 Trade), 90796 (L2 Growth), 90632 (L3 Aggregate Economic Activity) and Unit Standards 5860 (L2 Trade) and 5862 (L2 Growth).

## 1. *New Zealand agricultural land use*

Using the statistics in Figure 1, draw a bar graph that shows New Zealand's dairy land use versus total agricultural land use. Write sentences comparing the present day to land use in the 1980s and the 1990s.

## 2. *New Zealand exports*

Using the statistics in Figure 2, identify what percentage of New Zealand's exports are made up of dairy products. Write a sentence describing the way in which this has changed over time.

## 3. *Absolute advantage and comparative advantage*

Using the terms above, write a paragraph explaining why New Zealand produces and exports dairy products. Use the production possibility curve to illustrate these concepts.

## 4. *Two country supply and demand model*

Draw two supply and demand graphs to show New Zealand as an exporter of dairy products to the rest of the world. Show what happens to the New Zealand retail price of dairy products on the New Zealand graph.

## 5. Write a paragraph explaining the effect an increase on dairy prices would have on household consumption patterns.

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## APPLYING YOUR KNOWLEDGE

6. Read the Reserve Bank extract below, and:

- illustrate the effect of an increase in international dairy prices on an aggregate demand and aggregate supply graph, and explain what type of inflation this is
- draw a flow diagram illustrating how increasing international dairy prices leads to inflation. For more information, refer to 'Dairy prices and monetary policy' (page 7) in [www.rbnz.govt.nz/monpol/statements/jun07.pdf](http://www.rbnz.govt.nz/monpol/statements/jun07.pdf)

### Price shocks pose policy challenge

Dr Bollard highlighted a number of international price shocks that have posed key policy challenges: the surge in oil prices; a wider commodity price bloom; the global housing market boom and its after-effects; the consumption boom in advanced economies; and efforts to offset climate change.

"Inflation pressures in New Zealand have been significantly boosted by the shock to personal consumption from the housing boom and the rundown in household savings. Soaring global dairy prices have added to these pressures by boosting farm incomes. Higher prices for oil and other imported raw materials have also contributed through higher production costs. Soon New Zealand will be hit with yet another price shock as a result of the Emissions Trading Scheme."

*Extract: Reserve Bank News Release, 25 January 2008*

### Group activities

- Discuss the changing trends in New Zealand agricultural land use from 1980 through to today.
- Discuss the importance of dairy products to our balance of payments.
- In groups, brainstorm and discuss the effect of the supply and demand model from question 4 (pg 1) on consumers, producers and the government.
- Use your argument from question 5 (pg 1) to form the basis of small group debates on the topic 'Dairy products – luxury or necessity?'
- Discuss and make a list of what goods could be substituted for dairy products and the effect of these substitutions on the health and wealth of New Zealand families.

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## APPLYING YOUR KNOWLEDGE

1. Identify a rural area near your school where there are a number of existing dairy farms, dairy farm conversions or farmers who graze dairy cows. Draw a visual essay on how the local community could be affected by these farmers. Consider both the positive and negative aspects.
2. During 2007 a new \$110 million milk powder factory opened in Studholme, near Waimate in South Canterbury. Write a paragraph exploring the economic effects of this new venture:
  - during the construction phase
  - once production has started.
3. Identify the positive and negative effects of dairy industry trends on the New Zealand economy.
4. At the beginning of 2008 the Waikato region was suffering from a severe drought – milk production in the area decreased significantly. Make a list of all the people who would be affected by the decrease in milk production.

## Homework

A. Research New Zealand's dairy export destination countries. For each of these nations, you should note:

- (a) the dairy product(s) we export to them
- (b) how these products are used in the export country
- (c) the value of this market to New Zealand's dairy export market.

Also, research the total percentage of New Zealand's dairy products that are exported.

B. Read the *Timaru Herald* and *Campbell Live* extracts, then write a paragraph explaining why domestic consumers pay export prices for items produced in New Zealand. Use the following words: price taker, exporter, international commodity prices.

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## APPLYING YOUR KNOWLEDGE

### Price increases for dairy products

Individual product changes over the year (to January 2008) included cheddar cheese up 63%, fresh milk up 16.9%, butter up 85.2% and bread up 9.7%.

Extract: *The Timaru Herald*, 16 February 2008

"There was a 66% increase in the price of butter in 2007."

"Consumers are asking why we should pay export prices for something produced in New Zealand."

Source: *Campbell Live*, TV3, 11 February 2008  
<http://www.stuff.co.nz/4362646a7773.html>

C. Many consumers think the government should step in and control the domestic price of dairy products. Some options include:

- subsidising dairy products
- making dairy products non-GST items
- restricting the mark-up retailers can put on dairy products.

Complete the table below and then decide which option you think is best.

Write a paragraph to justify your decision.

OPTION	PROS	CONS
Subsidising dairy products		
Making dairy products non-GST items		
Restricting the mark-up retailers can put on dairy products		
The government not intervening		

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## APPLYING YOUR KNOWLEDGE

Figure 1: New Zealand's agricultural land use

Year	Number of dairy farms	Total number of farms in New Zealand	Hectares used for dairy farming	Total number of hectares for all farm types
1987	15,618	80,796	1,353,300	17,795,113
1990	16,858	80,904	1,572,904	17,489,398
1994	15,039	69,460	1,530,358	16,606,969
1999	15,951	80,376	N/A	N/A
2002	14,000	70,000	2,048,211	15,589,885
2005	12,810	64,488	2,115,528	15,305,478

Figure 2: New Zealand's top three exports by HS chapter heading

1998–2002						
Rank	Description	1998	1999	2000	2001	2002
1	Dairy	3,662,572	3,798,871	3,913,216	5,810,714	5,922,375
2	Meat	2,908,439	2,836,359	3,379,382	4,182,390	4,428,765
3	Wood	1,440,771	1,498,228	2,023,001	2,190,767	2,376,515
Total Exports		21,722,311	22,608,106	28,102,537	30,985,717	31,111,746

  

2003–2007						
Rank	Description	2003	2004	2005	2006	2007 (P)
1	Dairy	4,714,454	5,147,335	4,965,018	5,807,815	6,510,740
2	Meat	4,111,042	4,479,059	4,576,963	4,499,599	4,610,561
3	Wood	2,384,876	2,068,781	1,980,676	1,956,045	2,199,305
Total Exports		28,241,619	28,685,697	29,214,631	30,799,416	33,375,347

Source: Statistics New Zealand website