

**MAPPING THE STRUCTURE OF THE  
NEW ZEALAND FOOD & BEVERAGE INDUSTRY**

**Prepared for the Food and Beverage Taskforce**

**November 2005**



Coriolis Research Ltd. is a strategic market research firm founded in 1997 and based in Auckland, New Zealand. Coriolis primarily works with clients in the food and fast moving consumer goods supply chain, from primary producers to retailers. In addition to working with clients, Coriolis regularly produces reports on current industry topics. Recent reports have included an analysis of Retail Globalization: Who's Winning" and an "Overview of the Growth of Foodservice.



The coriolis force, named for French physicist Gaspard Coriolis (1792-1843), may be seen on a large scale in the movement of winds and ocean currents on the rotating earth. It dominates weather patterns, producing the counterclockwise flow observed around low-pressure zones in the Northern Hemisphere and the clockwise flow around such zones in the Southern Hemisphere. It is the result of a centripetal force on a mass moving with a velocity radially outward in a rotating plane. *In market research it means understanding the big picture before you get into the details.*



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## Executive Summary

The objective of this document is not to give answers. We all know the answers. Listen at every industry conference, read every industry body's strategic plan, analyse every company's annual report. Its all there – innovate, add value, enter new markets, grow sustainably, and ultimately create wealth and employment.

Rather this is a document of questions. How is our food industry doing? What are we making? Where are we selling it? Is this a growth market? These are vitally important questions because this country is still, in many ways, a country built on the sheep's back (and the cow's teat). So we need to get this right.

So how are we doing?

New Zealand food and beverage exports have grown from \$9.3b in 1994 to \$15.4b in 2004, adding \$6.1b in non-inflation adjusted growth over the last decade. This equates to a respectable 5.2% compound annual growth rate (cagr) on sales over the period. This is less than the 6.4% achieved by Pepsico over the same period, but more than the 4.3% achieved by Nestle, and broadly in the middle range of most major food and beverage companies.

This strong growth has been driven in large part by the traditional segments of the business – dairy, meat and horticulture – however the fast developing beverages sector actually led growth, achieving a cagr of 15.2%.

Much of the performance of the past decade has been underpinned by strong production growth in our farms and factories. This has been through a combination of both producing more and, in most cases, increasing productivity per unit.

However, it is unclear whether these traditional segments have “enough gas in the tank” to drive continued growth in the middle range, let alone allow us to beat the competition.

All of our key sectors, except kiwifruit, are experiencing very low global consumption growth in the -1 to 2% range. Unfortunately, in kiwifruit we are growing slower than the market and losing global market share. It is difficult to sustain long term growth with industries experiencing long term consumption decline.

Over the period we have experienced the effect of some one time shifts in product range, for example the one-time move from frozen to chilled lamb. In addition, we have benefited from a number of global crises affecting the meat industry. These will not happen in the next decade.

We have failed to significantly diversify our customer base and attract new customers. Our success is still reliant on the low growth, aging markets of the Australia, the United Kingdom, North America and Europe. On an export sales dollar per capita basis, we export \$55.30 per capita to the countries of Oceania, \$16.27 to the United Kingdom and \$7.83 to the US and Canada, but only \$2.44 per person to the fast growing Asian market and less than \$2 per person to any other part of the world, including a paltry \$0.13 per person to the Indian Subcontinent (primarily Sri Lanka). We need to lift our performance in the markets of the future, rather than fight for the declining markets of the past.

All is not doom and gloom. Wine has been a great success for the industry. Exports have grown from \$44 million in 1994 to \$367 million in 2004, achieving a stellar 23.6% cagr over the decade. What we need is another ten wine industries to grow and emerge as the new leaders, continuing to drive strong growth across the sector. These industries exist in an embryonic form – we just need to find and nurture them.

## PROJECT SCOPE

**This report provides a top level overview of the New Zealand food and beverage industry**

- **In December 2004, the New Zealand Government created the Food and Beverage Taskforce as a Government and industry-led initiative, to capitalise on one of the country's fastest-growing sectors.**
- **Coriolis Research was asked by the taskforce to provide an overview of the New Zealand Food and Beverage sector. This overview of the New Zealand food and beverage sector had a number of key objectives:**
  - **Create a common set of comparable quantitative measures**
  - **Provide a framework of facts for understanding the current industry**
  - **Develop an understanding of historic growth and, by implication, future growth potential of the industry**
  - **Analyse the total food and beverage industry from a “business” point of view**
- **The research does not prescribe solutions for the industry; instead it gives the members of the taskforce the information, ideas and context they need to develop a plan to ensure the industry remains a platform for growth in the future**

## PROJECT STRUCTURE

The analysis of the industry was structured as follows

- Split the industry into four resource based sectors:
  - 1. Pastoral land producing meat & dairy
  - 2. Arable land & horticulture producing grain, fruit, vegetables and beverages
  - 3. The ocean producing seafood
  - 4. Other food including both imports and processed combinations of the above
- Within each segment look at:
  - Primary production
  - Manufacturing and wholesaling
  - Markets
    - Brief overview of domestic markets
    - More detailed evaluation of export markets (given their importance to the industry)
      - on a global basis: consumption, production, imports and exports
      - Divide markets into domestic and eight cultural global mega regions (Europe/Russia, Sub-Saharan Africa, NA/ME/CA, Indian Sub-continent, E/SE Asia, US/Canada, Latin America and Oceania)

## PROJECT LIMITATIONS

### The project had a number of limitations

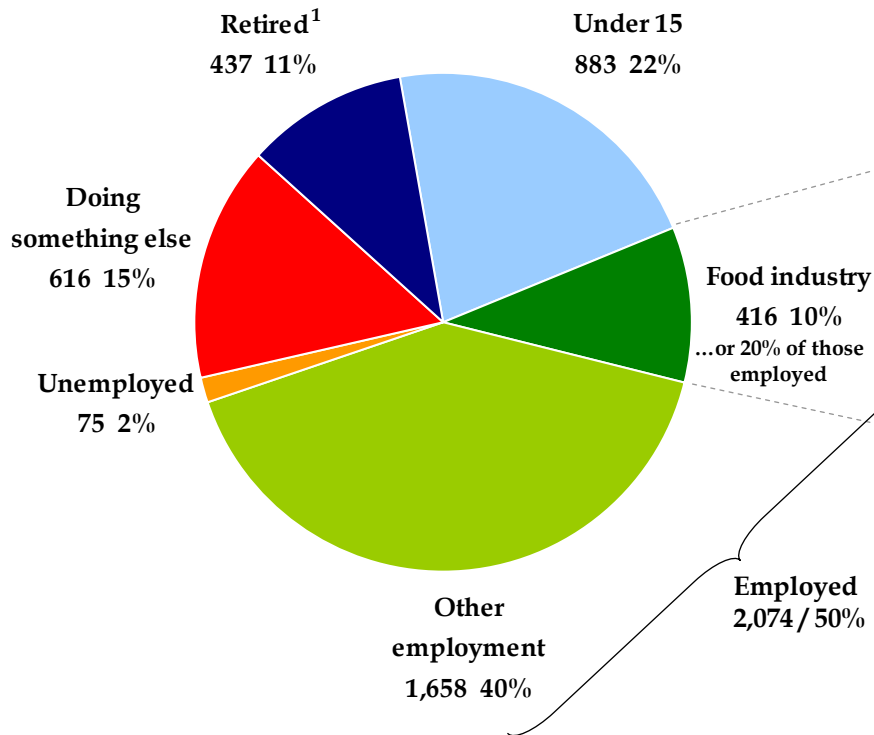
- The analysis looked briefly at all of the main sectors of the New Zealand food and beverage industry and is, as a result, “a mile wide and inch deep.” It is fully expected that this will be a “living document” and that the taskforce will provide additional data, context and colour to the document
- The numbers in this section come from a number of sources. While we believe the data is directionally correct, we recognise the limitations in what information is available. In many cases different data sources disagree (e.g. MAF vs. FAO). Many data sources themselves incorporate estimates of industry experts (e.g. milk production in Mozambique). If you disagree with the data presented, please forward yours.
- If you have any questions about the source or meaning of a number in this report, please contact the project leader, Tim Morris at Coriolis Research on (09) 623 1848

# WHY THE INDUSTRY IS IMPORTANT

One in ten people work in the food industry and it employs 20% of the working population

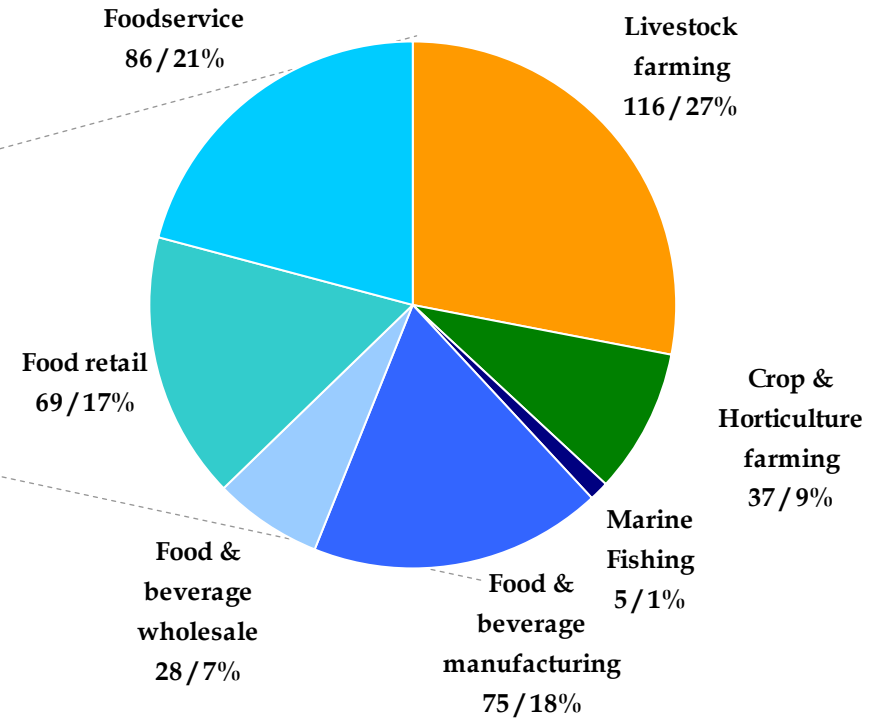
Food industry employment  
(people, thousands, 2003/4)

New Zealand population



Total = 4,084 thousand resident population

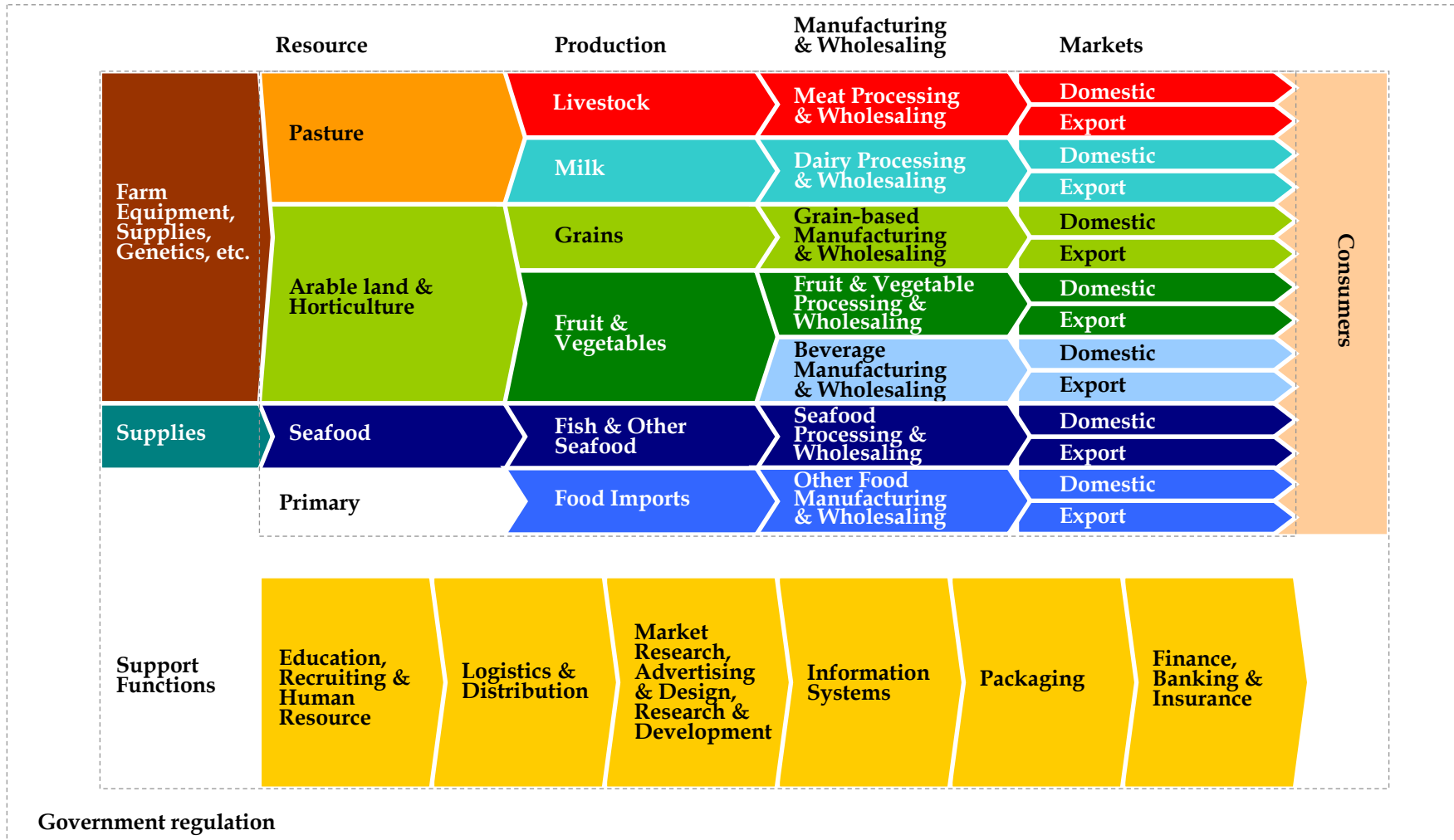
Food industry



Total = 416 thousand persons employed

# FOOD INDUSTRY MODEL

The food industry begins with three natural resources and ends with sales to domestic consumers or to export markets; in a wider sense, it also includes a number of support functions





## SIMPLIFIED FOOD INDUSTRY MODEL

However, for the purposes of this overview, we have simplified the model; the complete model is available in the appendix



# 1. PRIMARY PRODUCTION

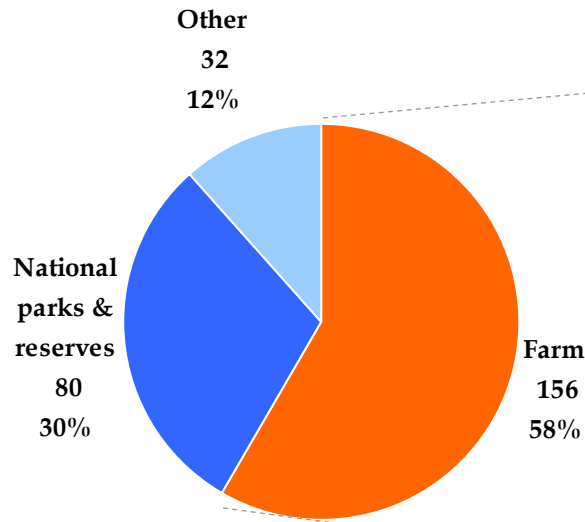
The first section of this overview looks at primary production



# LAND USE

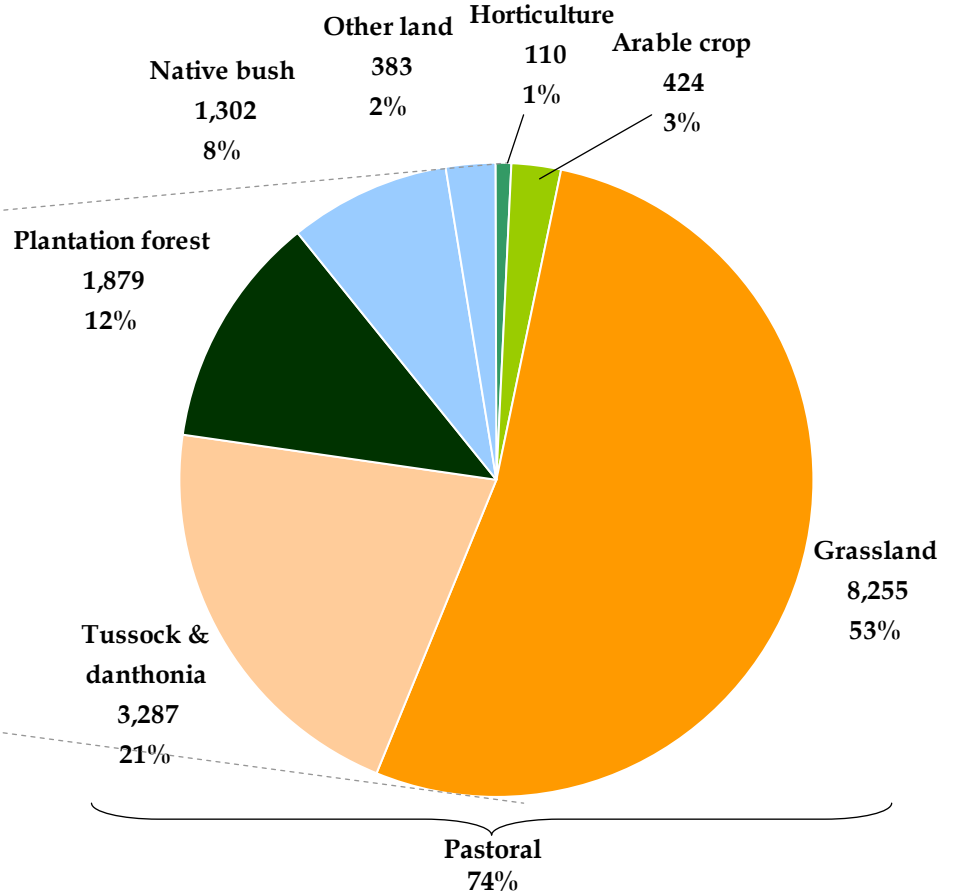
Farm land accounts for 56% of New Zealand land use, of which pastoral land accounts for 74%

Total New Zealand land use (sqkm, thousands, 2002)



Total = 268,000 sqkm

Total New Zealand farm land use (hectares, thousands, 2002)

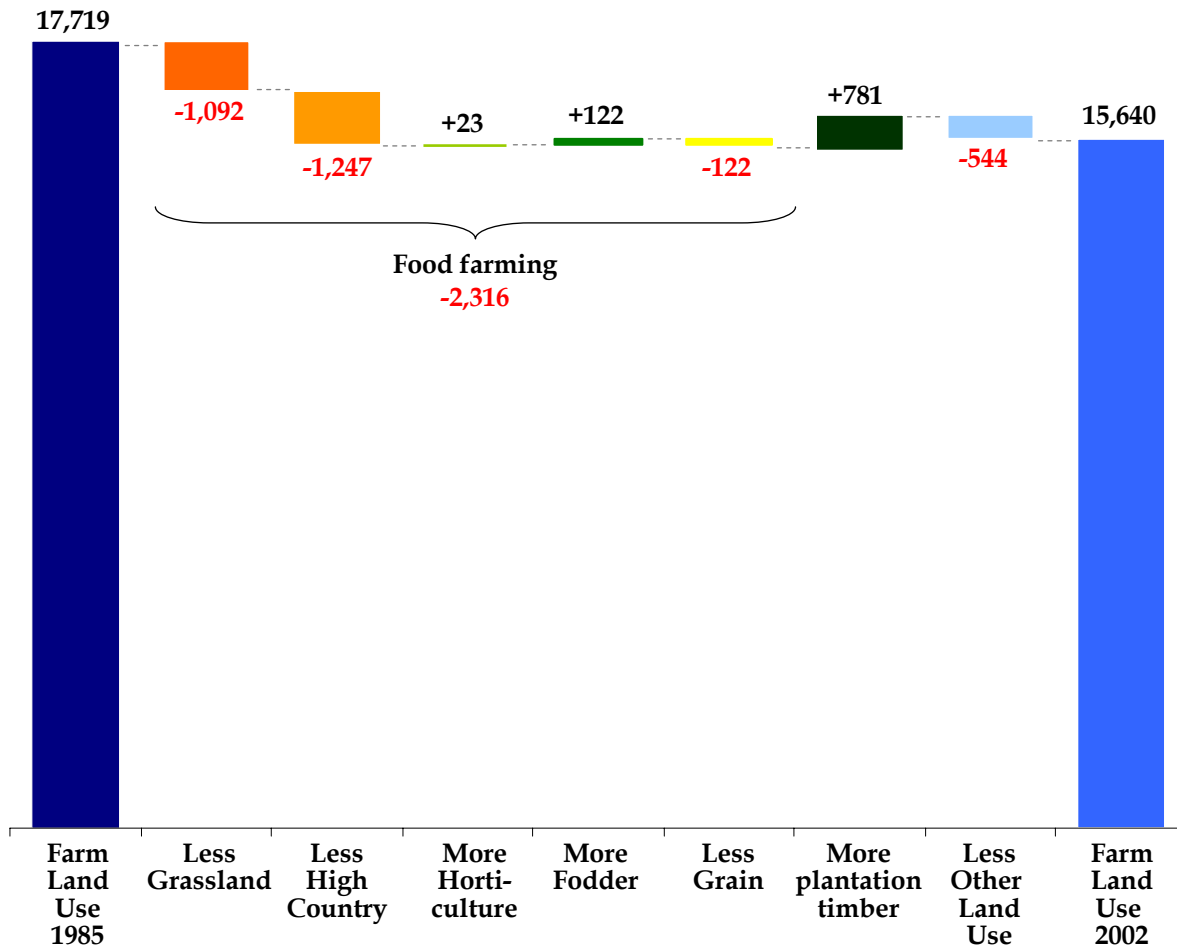


Total = 15,640,000 hectares

# LESS LAND USED FOR FOOD PRODUCTION

The amount of land used for food production is declining

Long term change in farm land use in New Zealand food (hectares; thousands; 1985 vs 2002)



### Discussion Points

- Causes of declining land use in food production
- Will this trend continue?

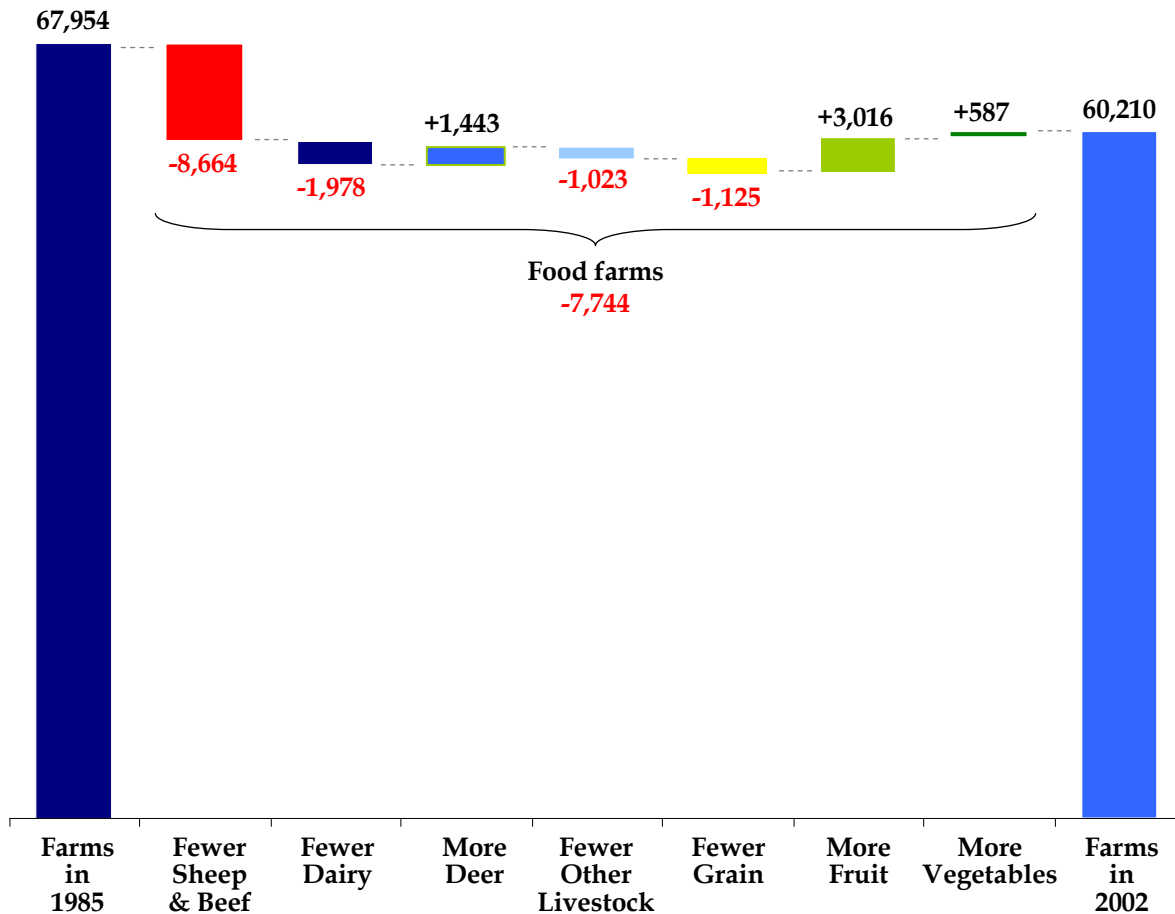
### Notes

- See appendix for details
- Seafood not included as the amount of ocean has not changed; no measure available of area under aquaculture

# FEWER FOOD PRODUCING FARMS

## The number of food producing farms is declining

Long term change in number of food producing farms in New Zealand (farms; actual; 1985 vs 2002)



### Discussion Points

- Causes of decline in number of food producing farms
- Will this trend continue?

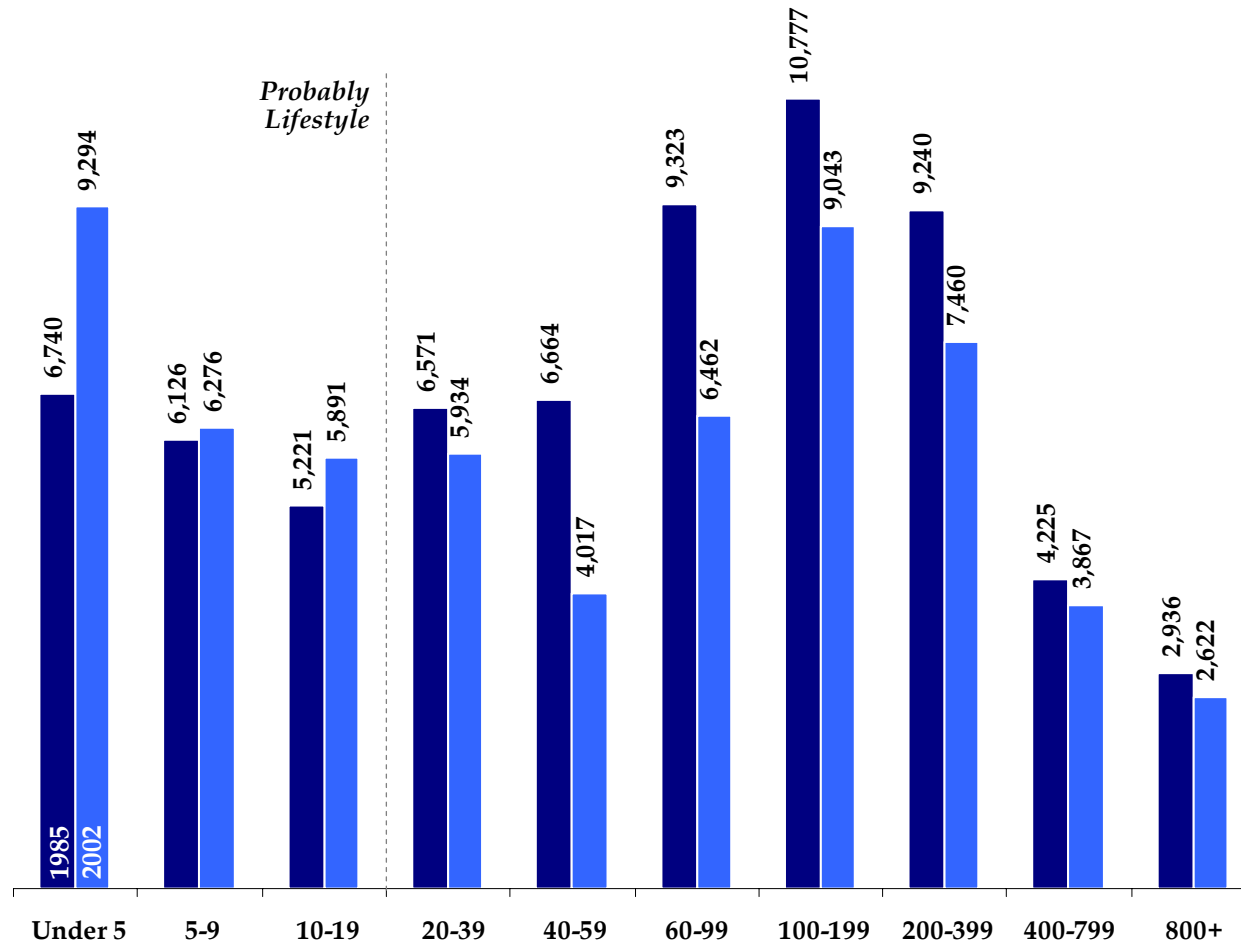
### Notes

- Over almost the same period (1985-2004) the number of fishing boats declined by **-1,191**; no comparable measure available for number of aquaculture farms
- See main document for details

# MORE SMALLER FARM / FEWER LARGER FARMS

There has been an across the board decline in farms numbers by size, except for the very small

Long term change in number of food producing farms by farm size (farms; actual; by size group in hectares; 1985 vs 2002)



### Discussion Points

- Implications for average farm efficiency and productivity
- Is polarisation occurring?
- Will this trend continue?

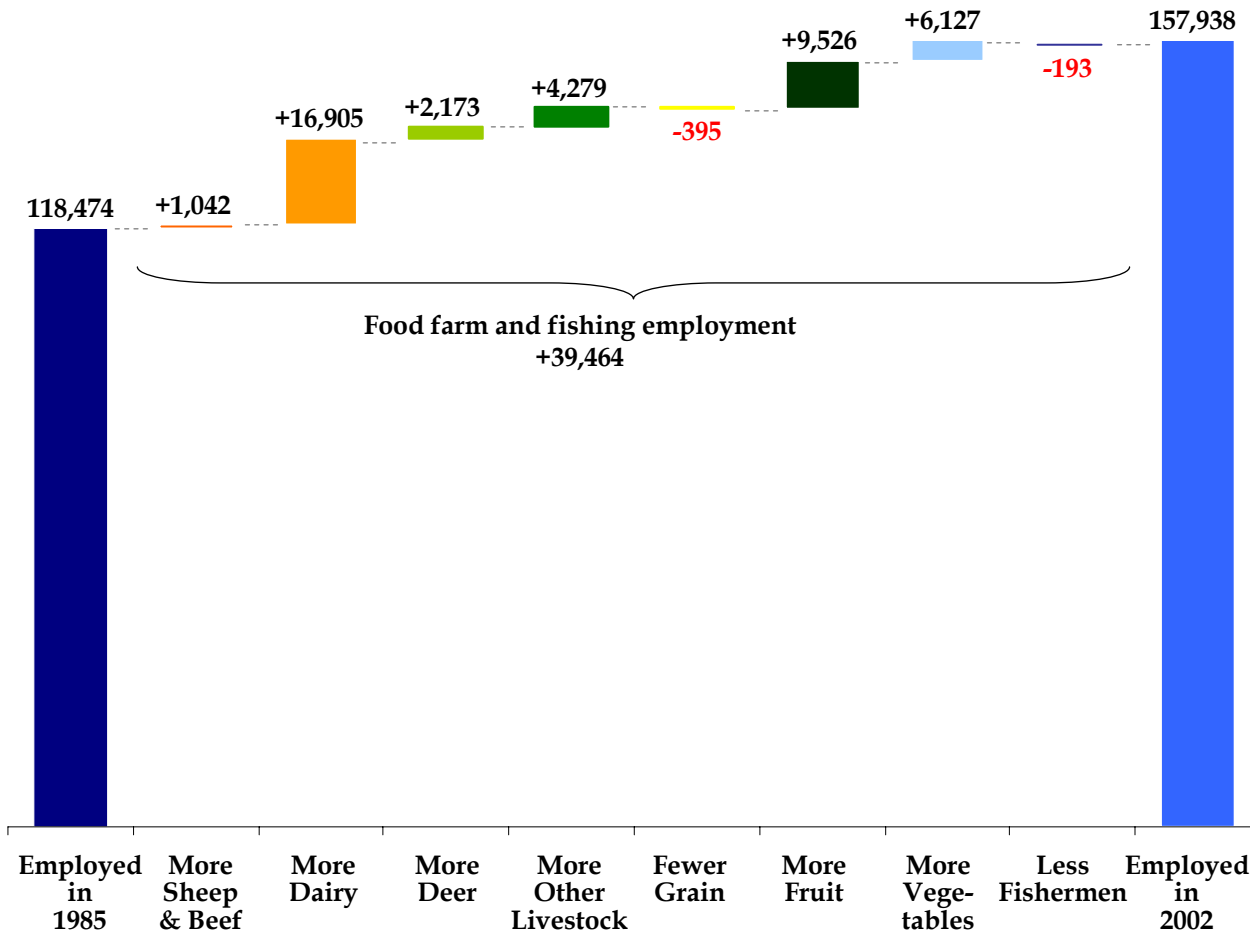
### Notes

- See main document for details

# MORE PEOPLE EMPLOYED IN THE PRIMARY SECTOR

The number of people employed in the primary production of food is increasing

Long term change in number of people employed on farms by type  
(people; actual; 1985 vs 1998)



## Discussion Points

- Are we becoming more labour intensive in primary production?
- Role of changing tax law (i.e. employing previously unpaid family members?)
- Will this trend continue?

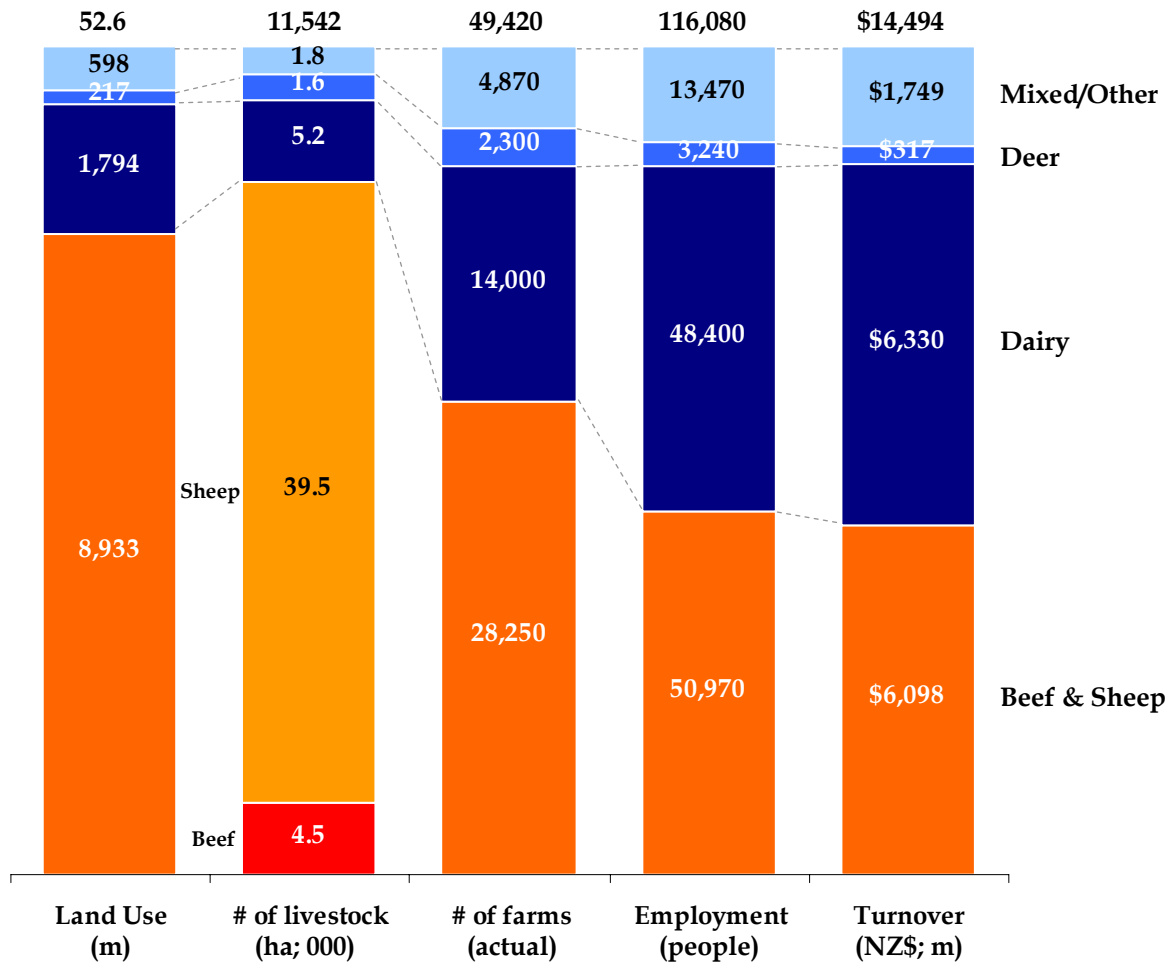
## Notes

- See various sections for details
- Total people not FTE; farm employment survey conducted only twice in last 18 years (1998, 2004)
- Uses 1998 data as this incorporated working proprietors (not measured in 2004 survey), except seafood which uses 2003 data which incorporates working proprietors
- May not capture total pool of seasonal labour; no measure of unpaid working family members (35,000 across livestock & horticulture in 1985 survey - the only time this was measured)

## A. PASTORAL AGRICULTURE - OVERVIEW

### Beef, sheep and dairy farming dominate New Zealand livestock farming

Livestock farming overview by farm type (various)



#### Discussion Points

- Relative efficiency by sector

#### Notes

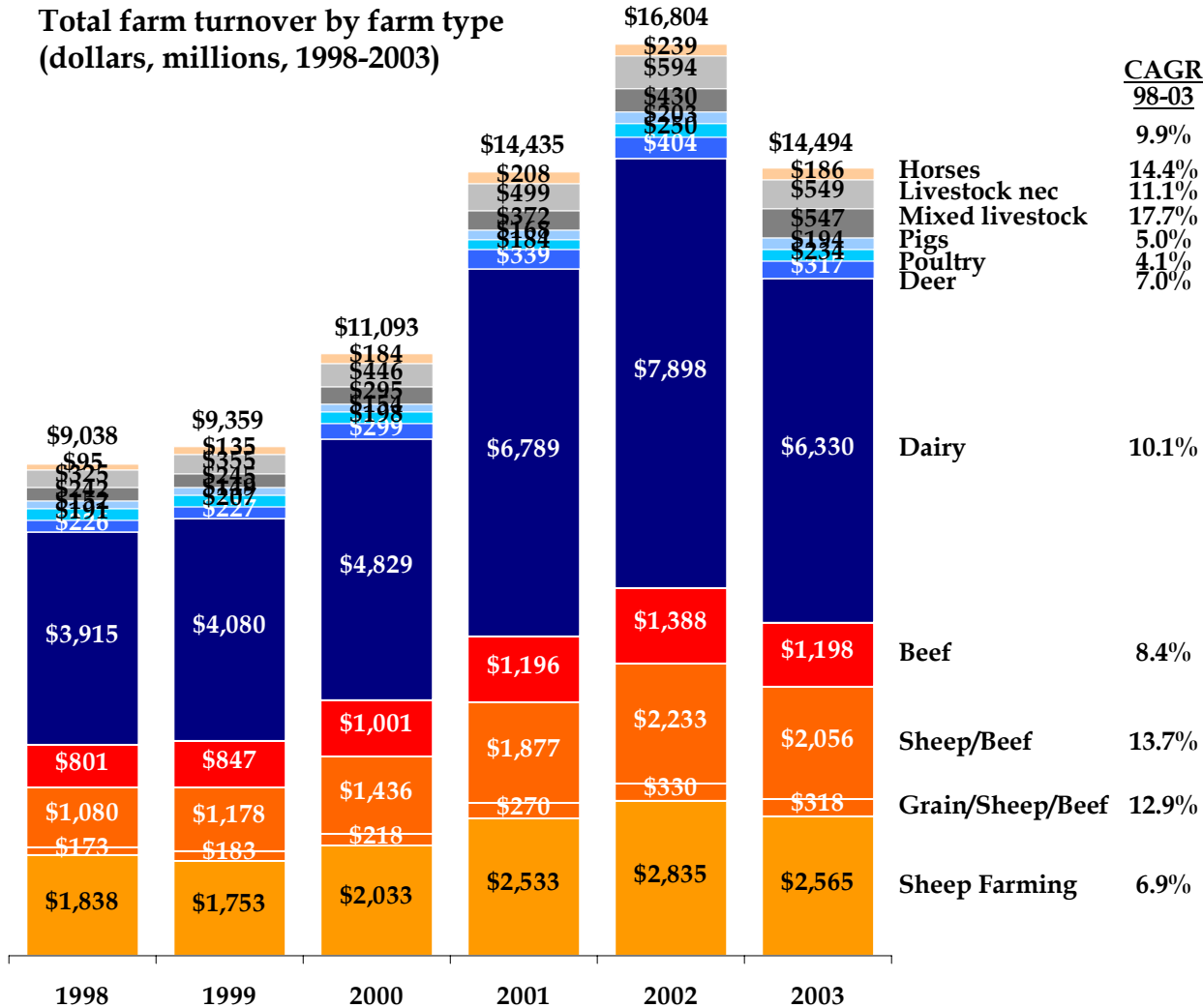
- Definitions and details available on relevant pages
- Sheep and beef data combined in most cases due to statistical softness between different definitions (i.e. primarily sheep, sheep-beef, beef)



# A. PASTORAL AGRICULTURE - FARM TURNOVER GROWTH

Pasture farm turnover showed strong growth in the last five years

Total farm turnover by farm type  
(dollars, millions, 1998-2003)



	CAGR 98-03
Horses	14.4%
Livestock nec	11.1%
Mixed livestock	17.7%
Pigs	5.0%
Poultry	4.1%
Deer	7.0%

### Discussion Points

- Has the cycle turned? If so, are we heading for a hard landing or soft?
- How much is sustainable? How much is cyclical or currency? How much is one off events (i.e. BSE)?

### Notes

- AES 2004 data not yet available
- Comparable data not prior to 1998
- Methodology defines farm by primary income source
- Actual dollars; not inflation adjusted

## A. PASTORAL AGRICULTURE - DIRECTIONAL TRENDS

Over the medium-to-long term, some sectors of livestock farming are struggling, while others are experiencing good growth

Directional trends in livestock farming  
(growth or decline)

	# of livestock		Land Use	# of Farms		Employment	Turnover
	(85-02)	(95-02)	(85-02)	(85-02)	(95-02)	(85-98)	(98-03)
Beef	▼	▼	▲	▲	▲	▲	▲
Sheep	▼	▼	▼	▼	▲	▼	▲
Sheep/ Beef	-	-	▼	▼	▼	▲	▲
Dairy	▲	▲	▲	▼	▼	▲	▲
Deer	▲	▲	▲	▲	▲	▲	▲
Pigs	▼	▼	▲	▼	▼	▲	▲
Poultry	▲	▲	▲	▼	▼	▲	▲
Other	▼	▼	▼	▲	▲	▲	▲

### Discussion Points

- Long-term prognosis for sheep?
- Ultimate potential of deer?
- Consolidation in dairy

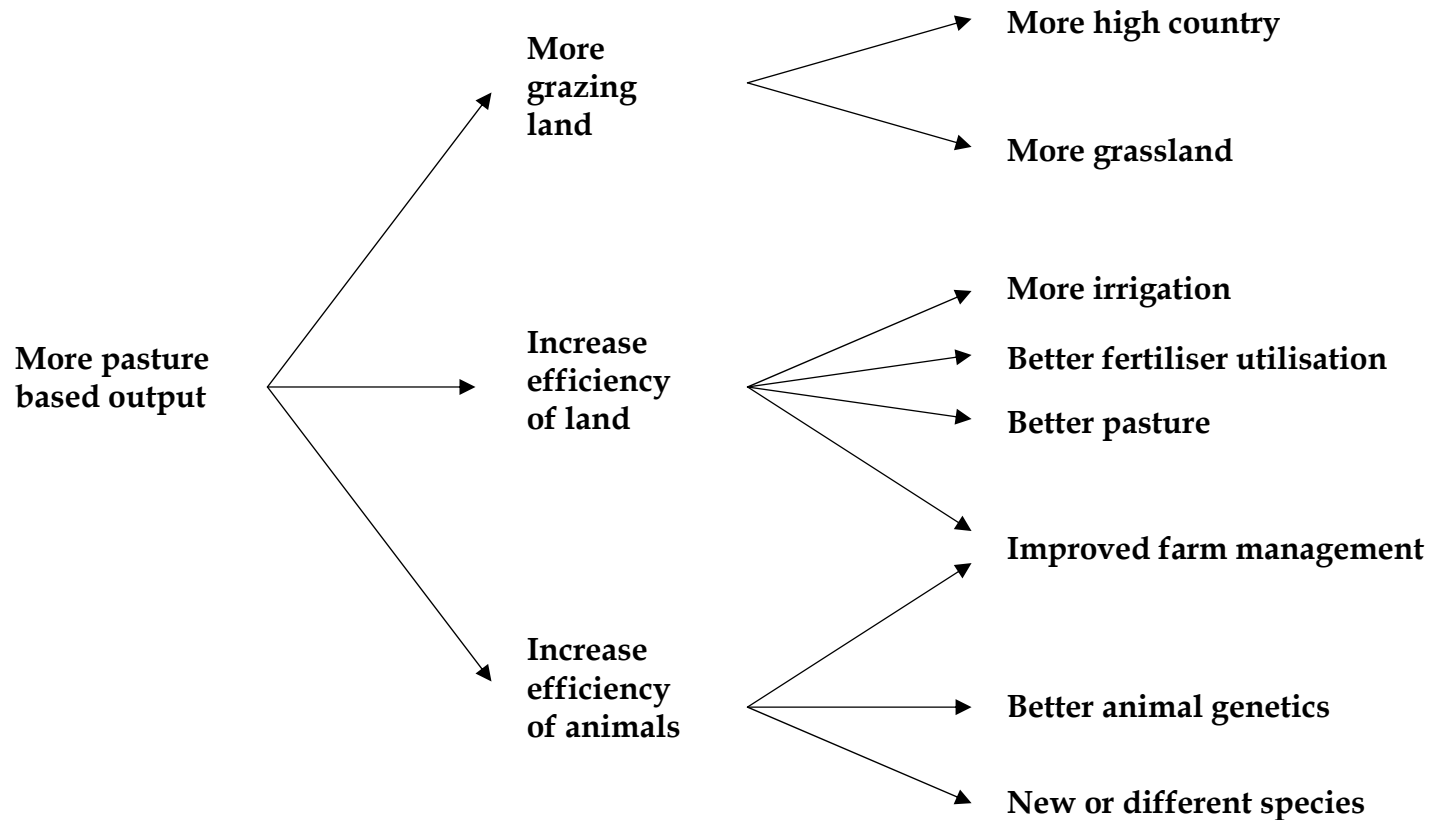
### Notes

- Differing time periods (e.g. turnover 5 years vs. land use 17 years)
- Use with caution; should be treated as directional; different surveys; different methods; different definitions
- Details available on specific pages

## A. PASTORAL AGRICULTURE - DRIVERS OF INCREASED OUTPUT

There are a limited number of drivers of increased output from pastoral agriculture

Key drivers of change in pasture-based land output  
(model)



## A. PASTORAL AGRICULTURE - POTENTIAL FOR TRANSFORMATIVE CHANGE

Pastoral agriculture in New Zealand will struggle to increase volume output significantly over the next decade

Potential for transformative change in pasture-based land output (model)

Objective	Key Driver	Potential for transformative change	Key Issues
More grazing land	More high country	None	<ul style="list-style-type: none"> <li>- Very marginal land created by historic subsidies</li> <li>- Increasing environmental concerns</li> </ul>
	More grassland	Low	<ul style="list-style-type: none"> <li>- Competition with forestry</li> <li>- Increase in lifestyle blocks (+37,600ha/year)</li> </ul>
Increase efficiency of land	More irrigation	Medium	<ul style="list-style-type: none"> <li>- Public opposition to new schemes</li> <li>- Cost of systems/new schemes</li> <li>- Market pricing of water</li> </ul>
	Better fertiliser utilisation	Low	<ul style="list-style-type: none"> <li>- Groundwater pollution</li> <li>- Cost</li> </ul>
	Better pasture	Low	<ul style="list-style-type: none"> <li>- Consumer opposition to genetic modification</li> </ul>
	Improved farm management	Medium	<ul style="list-style-type: none"> <li>- Dispersed and fragmented population</li> <li>- Traditional attitudes</li> <li>- Gap between leaders and average</li> </ul>
Increased efficiency of animals	Better animal genetics	Medium	<ul style="list-style-type: none"> <li>- Consumer opposition to genetic modification</li> </ul>
	New or different species	Low	<ul style="list-style-type: none"> <li>- Failure of numerous past attempts (e.g. goats)</li> <li>- Increased biosecurity regulation limiting new species introduction<sup>1</sup></li> </ul>

## A. PASTORAL AGRICULTURE - RECOMMENDATIONS

Based on our research, we make the following recommendations to the taskforce

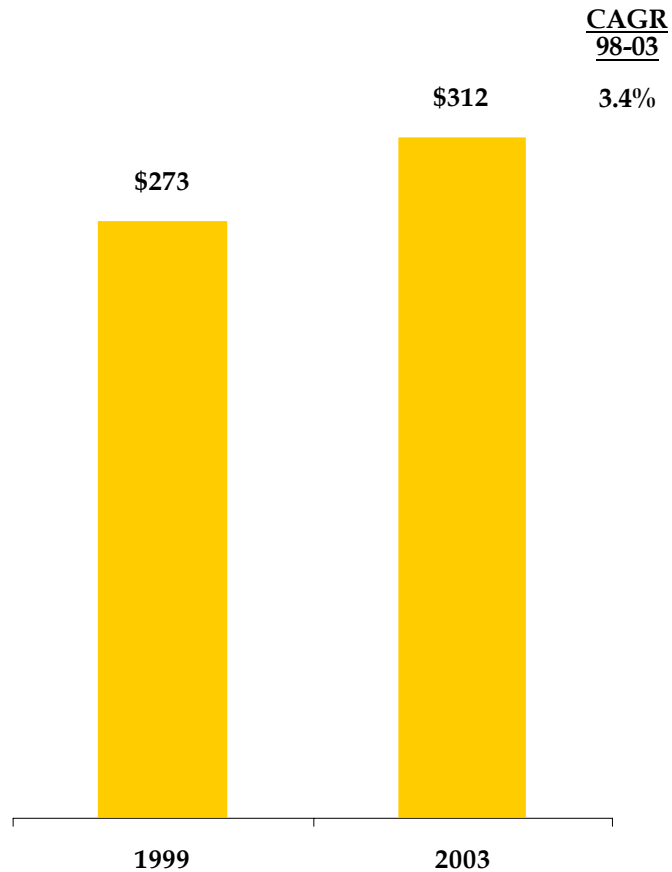
### Recommendations to Food and Beverage Taskforce to increase pasture-based land output

Objective	Issue	Recommendations
More grazing land	Massive growth of lifestyle blocks	<ol style="list-style-type: none"> <li>1. Control spread of lifestyle blocks through zoning rather than through minimum block size</li> <li>2. Research actual lifestyle land required per household (i.e. are we forcing them to take 20ha when they really want 2ha)</li> <li>3. Encourage systems to optimise production on lifestyle blocks (e.g. leasing by commercial farmers)</li> </ol>
	Decreasing amount of land being farmed	<ol style="list-style-type: none"> <li>1. Review effect of environmental legislation on land use</li> </ol>
Increase efficiency of land	More irrigation	<ol style="list-style-type: none"> <li>1. Measure amount of water used by irrigation</li> <li>2. Expand area served by irrigation schemes</li> <li>3. Introduce market pricing to water to encourage efficient use of water resources</li> <li>4. Encourage conversion of border dike irrigation to centre pivot irrigation</li> </ol>
	Better fertiliser utilisation	<ol style="list-style-type: none"> <li>1. Fund research into efficiency of fertiliser utilisation</li> </ol>
	Better pasture	<ol style="list-style-type: none"> <li>1. Continue to fund pasture research</li> <li>2. Ensure free access to overseas species/germ plasm</li> </ol>
	Improved farm management	<ol style="list-style-type: none"> <li>1. Ensure we have the best initial farm management training program</li> <li>2. Explore farm extension program to disseminate best practice</li> </ol>
Increased efficiency of animals	Better animal genetics	<ol style="list-style-type: none"> <li>1. Understand regulatory barriers to introduction of new genetic material</li> <li>2. Continue to fund agricultural research</li> </ol>
	New or different species	<ol style="list-style-type: none"> <li>1. Government program to evaluate potential new livestock species</li> <li>2. Review Hazardous Substances and New Organisms Act to enable free and open access to non-indigenous species required for continued innovation</li> <li>3. Explore role of government in infant industry support</li> </ol>

## B. ARABLE/HORTICULTURE - GRAIN - FARM TURNOVER GROWTH

Grain farm turnover only grew at 3.4% per annum between 1999-2003

Total grain farm turnover  
(dollars, millions, 1999-2003)



### Discussion Points

- Low growth of grain

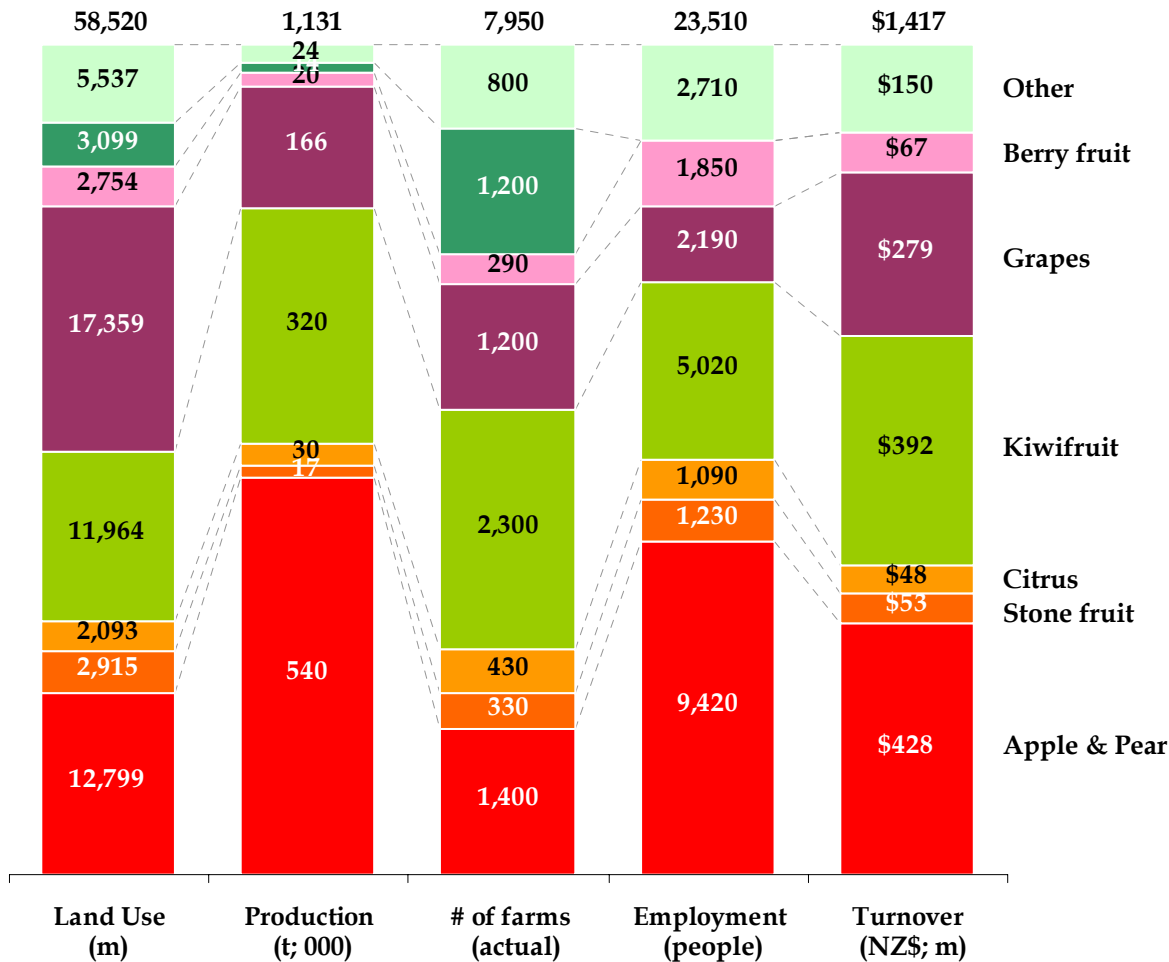
### Notes

- AES 2004 data not yet available
- Comparable data not available for earlier periods
- Methodology defines farm by primary income source
- Actual dollars; not inflation adjusted

## B. ARABLE/HORTICULTURE - FRUIT & NUTS - OVERVIEW

Apples, kiwifruit and grapes account for a large part of the fruit & nut sector

Fruit & nut horticulture overview by type  
(various)



### Discussion Points

- Relative efficiency be sector

### Notes

- Definitions and details available on relevant pages
- Production data understates other as data not collected for all fruit & nuts

## B. ARABLE/HORTICULTURE - FRUIT & NUTS - DIRECTIONAL TREND

### Grapes, avocados and “other” fruit & nuts stand out as the long-term winners

Directional trends in fruit & nut horticulture  
(growth or decline)

	Land Use (85-02)	(95-02)	Prod- uction (94-04)	# of Farms (85-02)	(95-02)	Employ- ment (85-98)	Turnover (98-03)
Apple & Pear	▲	▼	=	▲	▼	▲	▲
Stone fruit	▼	▼	▼	▲	▲	▲	▲
Citrus	▼	▲	▼	▲	▼	▲	▲
Kiwifruit	▼	=	▲	▲	▲	▼	▲
Grapes	▲	▲	▲	▲	▲	▲	▲
Berryfruit	▼	▲	▲	▼	▼	▲	▲
Avocados	▲	▲	▲	▲	▲	n/a	n/a
Other	▲	▲	▲	▲	▲	▲	▲

#### Discussion Points

- Long-term prognosis for apples

#### Notes

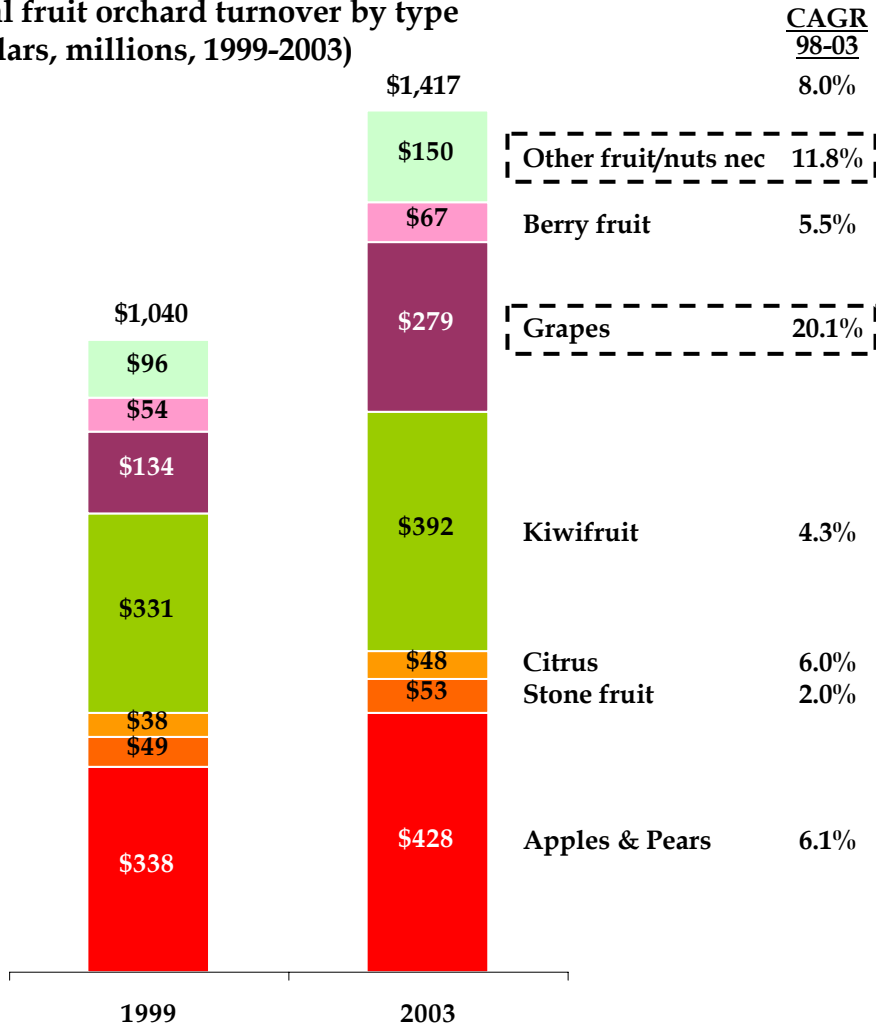
- Differing time periods (e.g. turnover 5 years vs. land use 17 years)
- Use with caution; should be treated as directional; different surveys; different methods; different definitions
- Details available on specific pages



## B. ARABLE/HORTICULTURE - FRUIT & NUTS - ORCHARD TURNOVER GROWTH

Orchard turnover is up in the past four years, especially in grapes and other fruit

Total fruit orchard turnover by type  
(dollars, millions, 1999-2003)



### Discussion Points

- Strong growth of grapes and other fruit

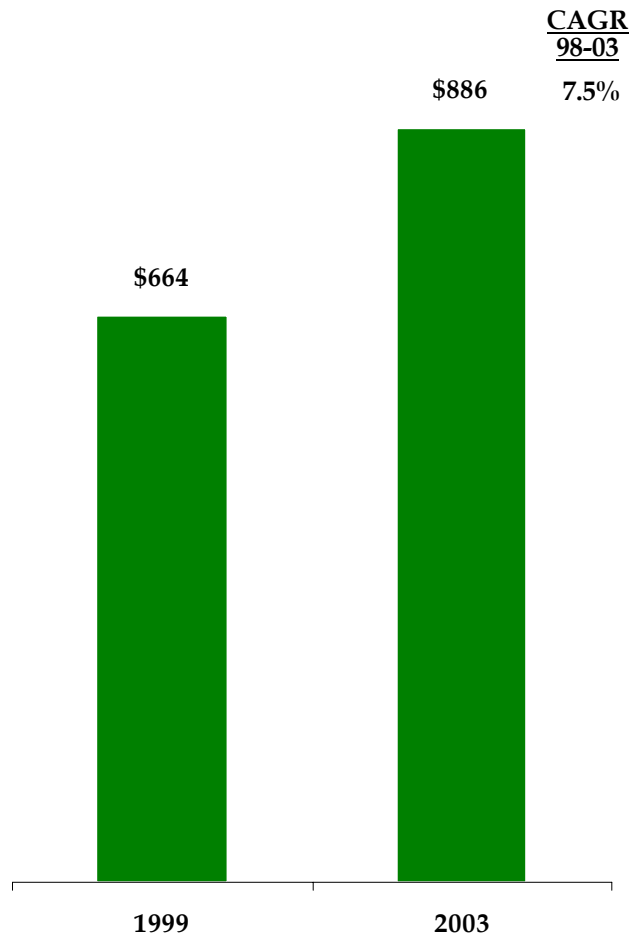
### Notes

- AES 2004 data not yet available
- Comparable data not available for prior periods
- Methodology defines farm by primary income source
- Actual dollars; not inflation adjusted

## B. ARABLE/HORTICULTURE - VEGETABLES - FARM TURNOVER GROWTH

Total vegetable farm turnover has grown at a compound rate of 7.5% in the past four years

Total vegetable farm turnover  
(dollars, millions, 1999-2003)



### Discussion Points

- What is driving turnover growth?

### Notes

- Actual dollars; not inflation adjusted
- No additional breakdown available at source
- AES 2004 data not yet available
- Comparable data not available for prior periods
- Methodology defines farm by primary income source

## B. ARABLE/HORTICULTURE - VEGETABLES - DIRECTIONAL TREND

From the limited data available, the vegetable industry does not look healthy

Directional trends in vegetable farming  
(growth or decline)

	Land Use (82-02)	(95-02)	Prod- uction (94-04)	# of Growers (97-04)	Employ- ment (85-98)	Turnover (98-03)
Overall	▲	▼	▼	▼	▼	▲
Potatoes	▲	=	▲	▼	n/a	n/a
Onions	▲	▼	▼	▼	n/a	n/a
Peas & beans	▼	▼	▼	▼	n/a	n/a
Sweetcorn	▲	▼	▲	▼	n/a	n/a
Squash	▲	▼	▼	▼	n/a	n/a
Broc/Cab/ Cauli	▲	▼	▲	▲	n/a	n/a
Asparagus	▼	▼	▼	▼	n/a	n/a
Carrots	▲	▼	▼	▼	n/a	n/a
Other	▲	▼	▲	▼	n/a	n/a

### Discussion Points

- Why?

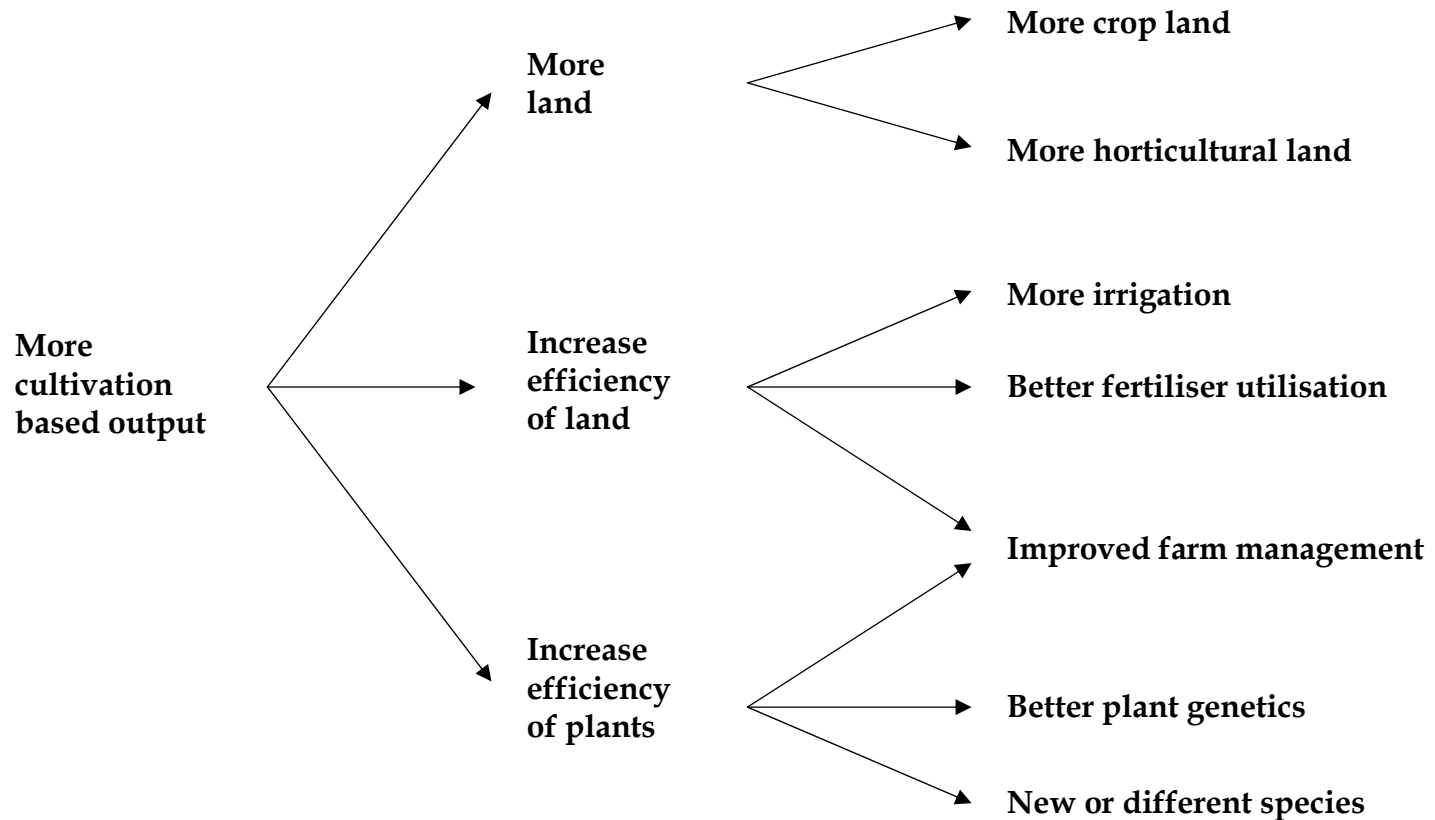
### Notes

- **Limited data available**
- Differing time periods (e.g. turnover 5 years vs. land use 17 years)
- Use with caution; should be treated as directional; different surveys; different methods; different definitions
- Details available on specific pages

## B. ARABLE/HORTICULTURE - DRIVERS OF INCREASED CULTIVATED LAND OUTPUT

There are a limited number of drivers of increased output from cultivated land

Key drivers of change in cultivated land output  
(model)



## B. ARABLE/HORTICULTURE - POTENTIAL FOR TRANSFORMATIVE CHANGE

While New Zealand will struggle to increase crop output, there appears to be opportunities in increased horticultural output

Potential for transformative change in cultivated land output (model)

Objective	Key Driver	Potential for transformative change	Key Issues
More land	More crop land	Low	<ul style="list-style-type: none"> <li>- Competing land use (e.g. horses in Waikato)</li> <li>- Not a low cost producer of grains/pulses</li> </ul>
	More horticultural land	Medium	<ul style="list-style-type: none"> <li>- Increase in lifestyle blocks (+37,600ha/year)</li> <li>- More sheep-to-grapes/olives conversions</li> </ul>
Increase efficiency of land	More irrigation	High	<ul style="list-style-type: none"> <li>- Public opposition to new schemes</li> <li>- Cost of systems/new schemes</li> <li>- Market pricing of water</li> </ul>
	Better fertiliser utilisation	Medium	<ul style="list-style-type: none"> <li>- Groundwater pollution</li> <li>- Cost vs. returns</li> </ul>
	Improved farm/orchard management	Medium	<ul style="list-style-type: none"> <li>- Dispersed and fragmented population</li> <li>- Traditional attitudes</li> <li>- More efficient production systems</li> </ul>
Increased efficiency of plants	Better plant genetics	Medium	<ul style="list-style-type: none"> <li>- Improved cultivars of existing species</li> <li>- Consumer opposition to genetic modification</li> </ul>
	New or different species	Medium	<ul style="list-style-type: none"> <li>- Emerging new species (e.g. nuts, olives)</li> <li>- Increased biosecurity regulation limiting new species introduction<sup>1</sup></li> <li>- High cost of introducing new species</li> </ul>

## B. ARABLE/HORTICULTURE - RECOMMENDATIONS

Based on our research, we make the following recommendations to the Taskforce

### Recommendations to Food and Beverage Taskforce to increase cultivated land output

Objective	Issue	Recommendations
More land	Massive growth of lifestyle blocks	<ol style="list-style-type: none"> <li>1. Control spread of lifestyle blocks through zoning rather than through minimum block size</li> <li>2. Research actual lifestyle land required per household (i.e. are we forcing them to take 20ha when they really want 2ha)</li> <li>3. Encourage systems to optimise production on lifestyle blocks (e.g. leasing by commercial farmers)</li> </ol>
	Decline in land under arable crops	<ol style="list-style-type: none"> <li>1. Research causes of arable crop land decline</li> <li>2. Research requirements for globally competitive grain production (e.g. new varieties)</li> </ol>
Increase efficiency of land	More irrigation	<ol style="list-style-type: none"> <li>1. Measure amount of water used by irrigation</li> <li>2. Expand area served by irrigation schemes</li> <li>3. Introduce market pricing to water to encourage efficient use of water resources</li> <li>4. Encourage use of drip irrigation</li> </ol>
	Better fertiliser utilisation	<ol style="list-style-type: none"> <li>1. Fund research into efficiency of fertiliser utilisation (more efficient/less runoff)</li> </ol>
	Improved farm management	<ol style="list-style-type: none"> <li>1. Ensure we have the best initial farm/orchard management training program</li> <li>2. Explore farm extension program to disseminate best practice</li> </ol>
Increased efficiency of plants	Better plants genetics	<ol style="list-style-type: none"> <li>1. Ensure access to leading international sources of plant genetics</li> <li>2. Understand regulatory barriers to introduction of new genetic material</li> <li>3. Continue to fund agricultural research</li> </ol>
	New or different species	<ol style="list-style-type: none"> <li>1. Government program to evaluate potential new livestock species</li> <li>2. Review Hazardous Substances and New Organisms Act to enable free and open access to non-indigenous species required for continued innovation (no new commercial plant species imported since act introduced (ie 7 years))</li> <li>3. Explore role of government in infant industry support</li> </ol>

## 2. MANUFACTURING & WHOLESALING

The second section of this overview looks at manufacturing and wholesaling



## SWOT ANALYSIS -FOOD & BEVERAGE INDUSTRY

### New Zealand food manufacturers face a uncertain future

SWOT analysis of New Zealand in a global food and beverage market

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>- Natural environment highly conducive to pastoral agriculture</li> <li>- Low cost energy inputs</li> <li>- Disease free status</li> <li>- Potential for year round production</li> <li>- Positive reputation internationally (but low awareness)</li> </ul>	<ul style="list-style-type: none"> <li>- Six to twelve weeks sea freight to major markets; very expensive airfreight to Northern Hemisphere; excessive shipping costs across the Tasman</li> <li>- Twelve to twenty four hours flight for senior managers to meet with customers</li> <li>- Relatively small domestic market</li> <li>- Only one top 50 global food and beverage company based here</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>- Continued income and consumption growth in Asia</li> <li>- Ongoing global growth of foodservice</li> <li>- Aging baby boomers seeking healthy foods</li> <li>- Closer economic integration with Australia</li> <li>- Growing Asian population in New Zealand</li> <li>- Ongoing moves towards more free trade through bilateral and multilateral talks</li> <li>- Genetic modification to create super-food</li> </ul>	<ul style="list-style-type: none"> <li>- Consolidation by retail chains in North America, Europe and Asia leading to uneven bargaining and downward pressure on prices</li> <li>- Consolidation by food and beverage manufacturers making New Zealand a sales office</li> <li>- Increasing food and beverage production in China</li> <li>- Changing global weather patterns</li> </ul>



## CAPABILITY ASSESSMENT

Comparing the capabilities of the New Zealand food industry to Frito-Lay, a division of Pepsico with roughly the same turnover, indicates Dairy is currently the best positioned sector

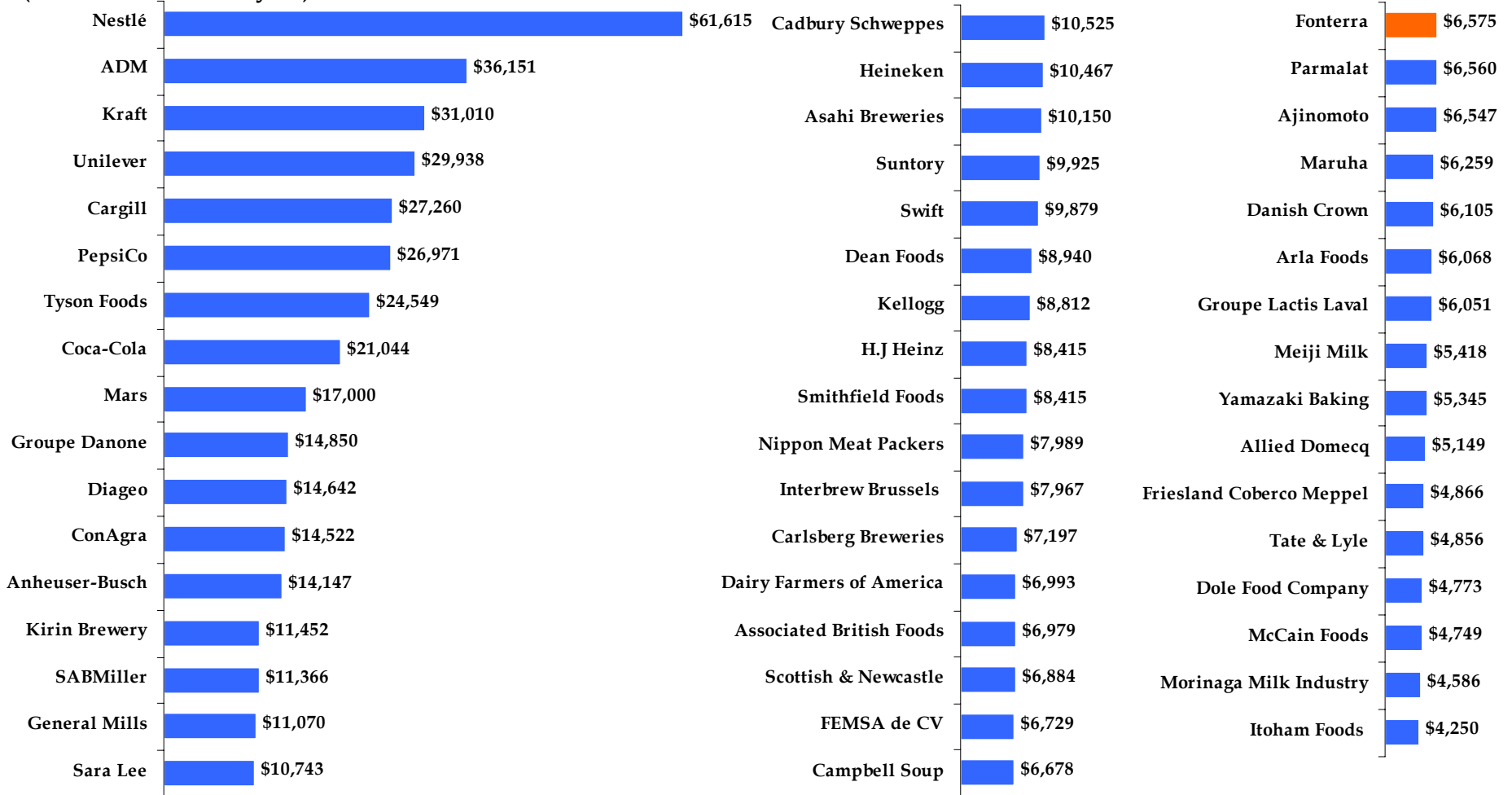
New Zealand Food & Beverage capability assessment (model)

	Global sales force regularly calling on all accounts	Strong brands	Track record of successful innovation	Market share leader in segment	Low cost production infrastructure	Well financed parent(s)
Frito-Lay	●	●	●	●	●	●
Dairy	◐	◐	○	◐	●	◐
Meat	◐	○	○	○	◐	○
Seafood	○	○	○	○	○	○
Horticulture (ex wine)	○	○	●	◐	○	○
Wine	●	◐	●	○	○	●
Other	○	○	○	○	○	○

# TOP 50 GLOBAL FOOD & BEVERAGE COMPANIES

In a globalising and consolidating world, food and beverage multinationals are the winners – we currently have one based in New Zealand; how do we have more?

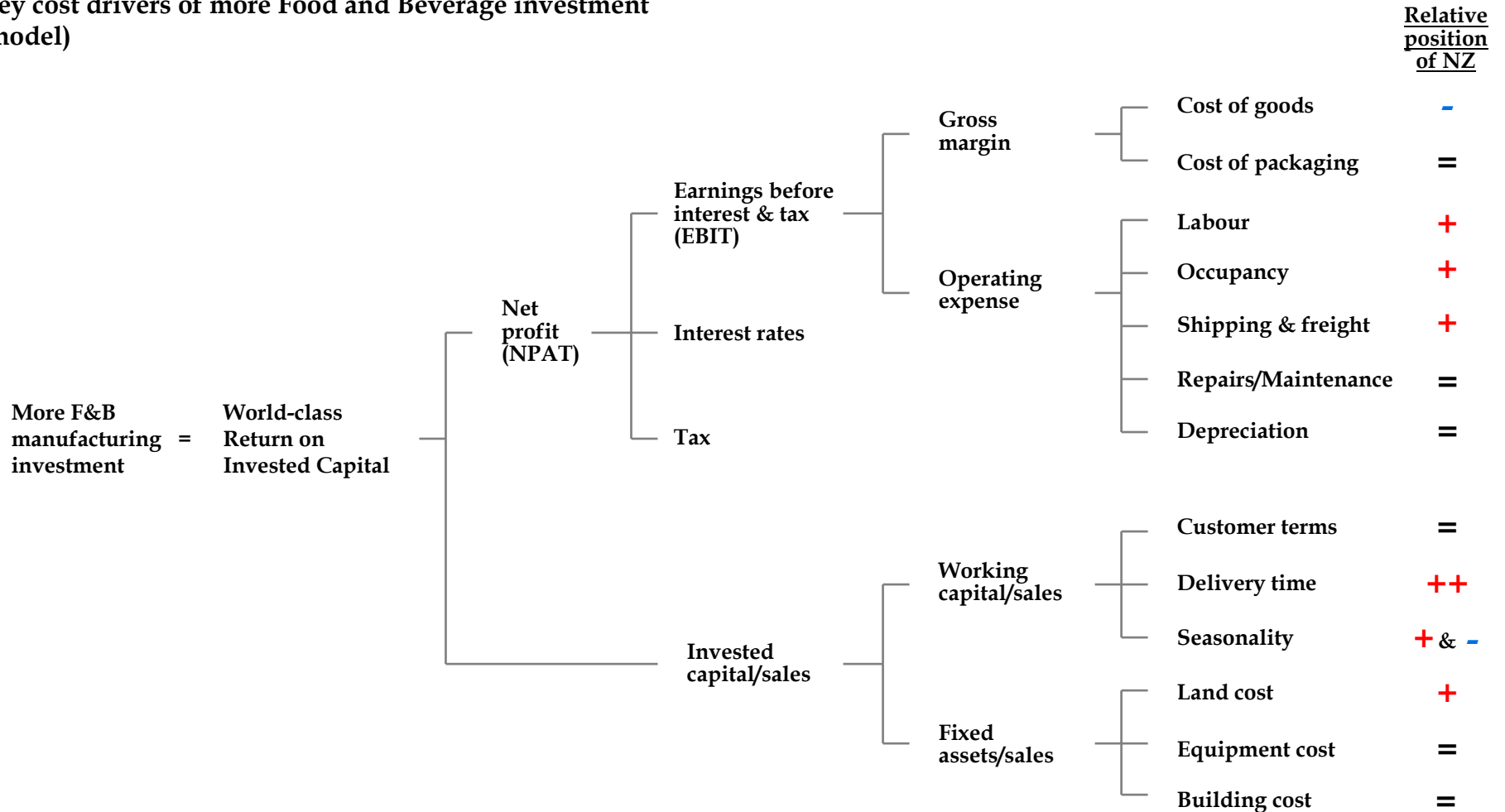
Top 50 Global Food and Beverage Companies  
(US\$m; FY03 or early 04)



# DRIVERS OF INCREASED F&B MANUFACTURING INVESTMENT

More food and beverage investment in New Zealand will come from delivering a world-class return on invested capital through addressing the higher costs of local manufacturing

Key cost drivers of more Food and Beverage investment (model)



## POTENTIAL FOR TRANSFORMATIVE CHANGE

Increasing the return from investment in food and beverage will come from the cumulative effect of a number of changes

Encouraging increased investment in Food & Beverage manufacturing (model)

Objective	Key Driver	Potential for transformative change	Key Issues
Larger gross margins	Tariffs and duties	Low	- Remaining tariffs and duties on raw materials
Lower operating expenses	Labour	Low	- Productivity of workforce - Availability of workers
	Occupancy	Low	- Time and investment to open new facility
	Shipping & freight	Medium	- Inability of SME to negotiate low shipping rates - Limited number of freight companies - Relatively high cost of crossing Cook Strait - Relatively high cost of crossing Tasman
	Depreciation	Medium	- Depreciation rates unreflective of business reality
Less tax	Relative levels	High	- Investment in New Zealand competes with other countries with a lower tax burden
Lower working capital/sales	Distance to market	None	- Cash flow impact of long travel time to key markets
Lower fixed assets/sales	Land cost	Low	- Time and cost involved in negotiating environmental regulation
	Equipment cost	Low	- Remaining tariffs and duties on machinery and equipment - Limited number of suppliers

## RECOMMENDATIONS

Based on our research, we make the following recommendations to the taskforce

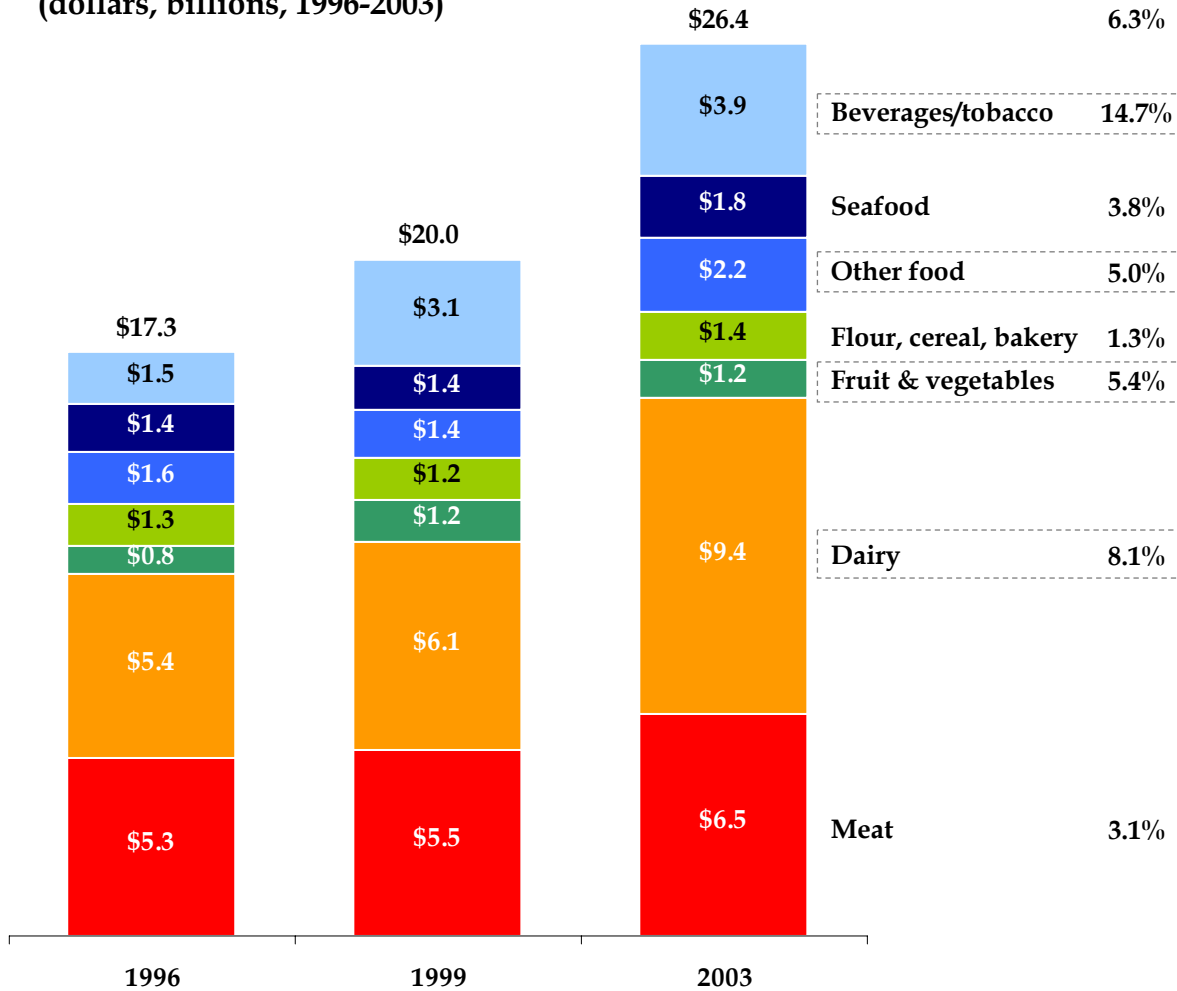
### Recommendations to Food and Beverage Taskforce to increase investment in food and beverage manufacturing

Objective	Issue	Recommendations
Larger gross margins	Remaining tariffs and duties	1. Investigate any remaining tariffs and duties on inputs to the food and beverage industry (ingredients and capital assets)
Lower operating expenses	Low workforce productivity	1. Ensure basic education is received by all 2. Invest in training
	Tight labour market	1. Encourage a greater percent of the population to enter the workforce 2. Facilitate development and spread of labour saving machinery 3. Facilitate immigration of skilled workers
	High shipping costs	1. Pool smaller exporters volumes and negotiate better rates in bulk
	Achieving economies of scale	1. Understanding benefits and constraints on scale in New Zealand (vs. competition) 2. Facilitate horizontal alliances between companies to share costs
	Unrealistic depreciation	1. Align depreciation schedule with real-world usage
Less tax	Relative tax burden	1. Benchmark f&b tax burden with relevant investment competitors (temperate climate livestock and horticulture producing countries (e.g. Chile))
Lower working capital/sales	Distance to market	1. Ensure factory-to-ship process is streamlined and un-encumbered with red-tape 2. Ensure/encourage/facilitate competition in sea and air freight
Lower fixed assets/sales	Land cost	1. Streamline environmental consent process for green fields sites

# FOOD & BEVERAGE MANUFACTURING TURNOVER

Food & beverage manufacturing is growing, driven by dairy, beverages/tobacco, fruit & vegetables and other food

Food & Beverage manufacturing turnover by sector  
(dollars, billions, 1996-2003) CAGR  
(96-03)  
6.3%



## Discussion Points

- Continuing reliance on livestock-based products

## Notes

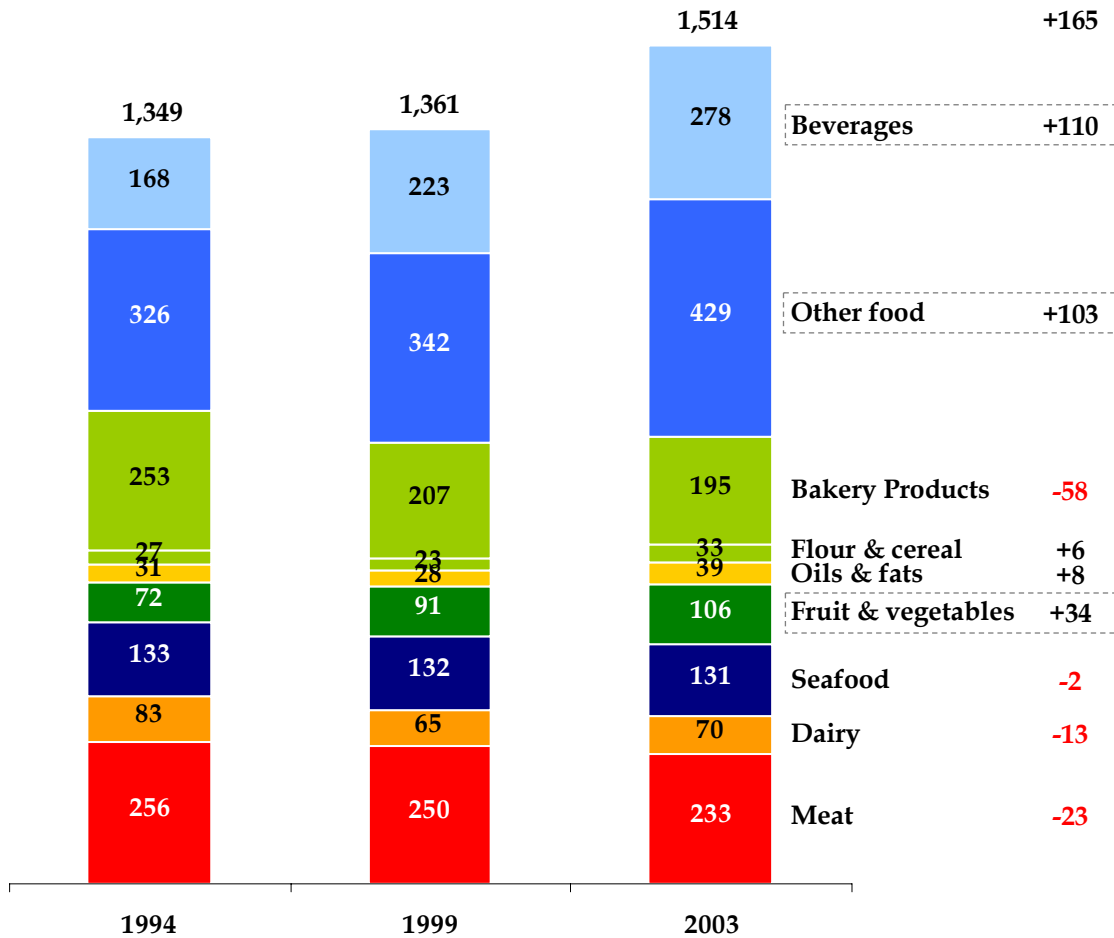
- No data available prior to 1996 (AES); 2004 data not yet available
- Beverages includes wine
- Beverages includes tobacco (inseparable at source)

# NUMBER OF FOOD & BEVERAGE MANUFACTURING ENTERPRISES

Only three sectors of food and beverage manufacturing are creating significant numbers of new enterprises: beverages, "other food" and fruit & vegetables

Food & Beverage manufacturing enterprises by sector (enterprises, actual, 1994-2003)

Absolute Change (94-03)



+165

Beverages +110

Other food +103

Bakery Products -58

Flour & cereal +6

Oils & fats +8

Fruit & vegetables +34

Seafood -2

Dairy -13

Meat -23

## Discussion Points

- Large economic importance of a small number of enterprises

## Notes

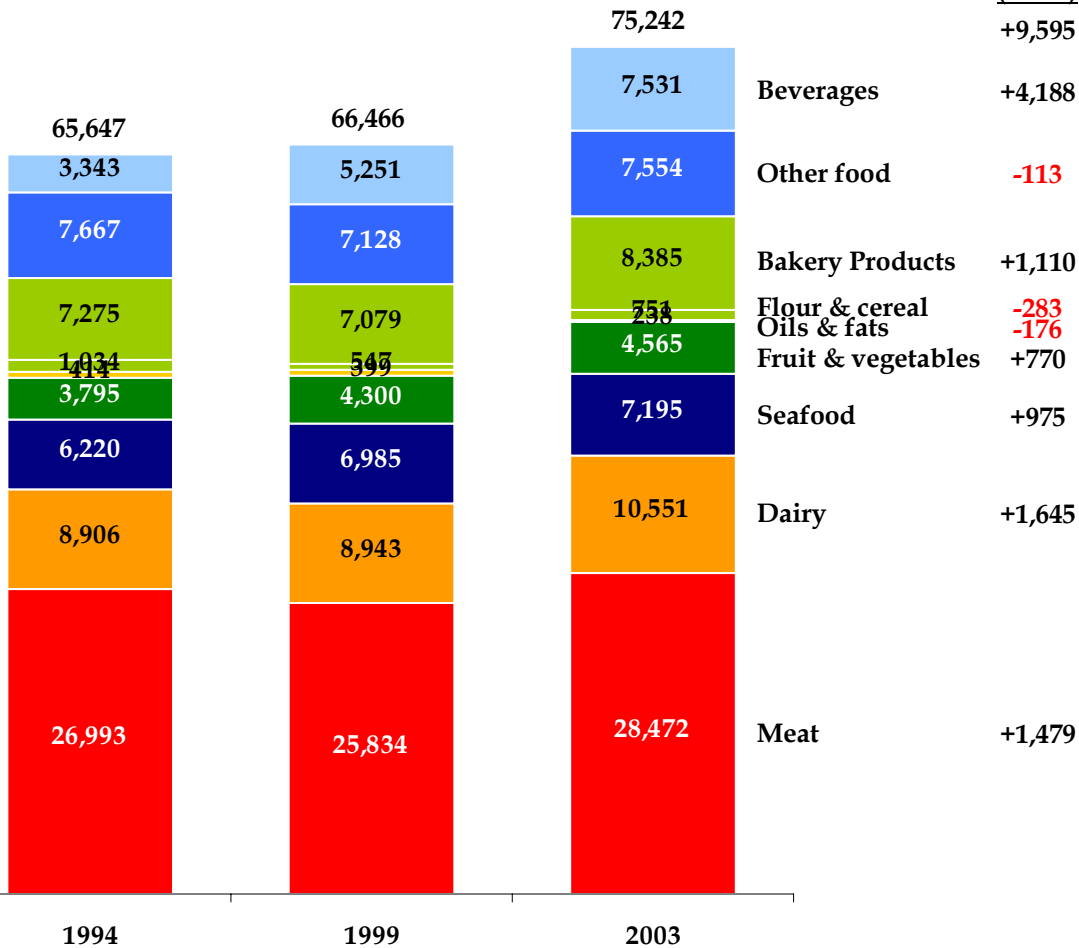
- Defined as businesses registered for GST purposes (+\$30,000pa)
- Beverages includes wine

## NUMBER OF EMPLOYEES

Food and Beverage employment growth is coming from all sectors except “other food,” flour & cereal and oils and fats

Food & Beverage manufacturing employees by sector  
(people, actual, 1994-2003)

Absolute  
Change  
(94-03)



### Discussion Points

- Other food: more enterprises with fewer employees?

### Notes

- Includes working proprietors
- Total employees not FTE

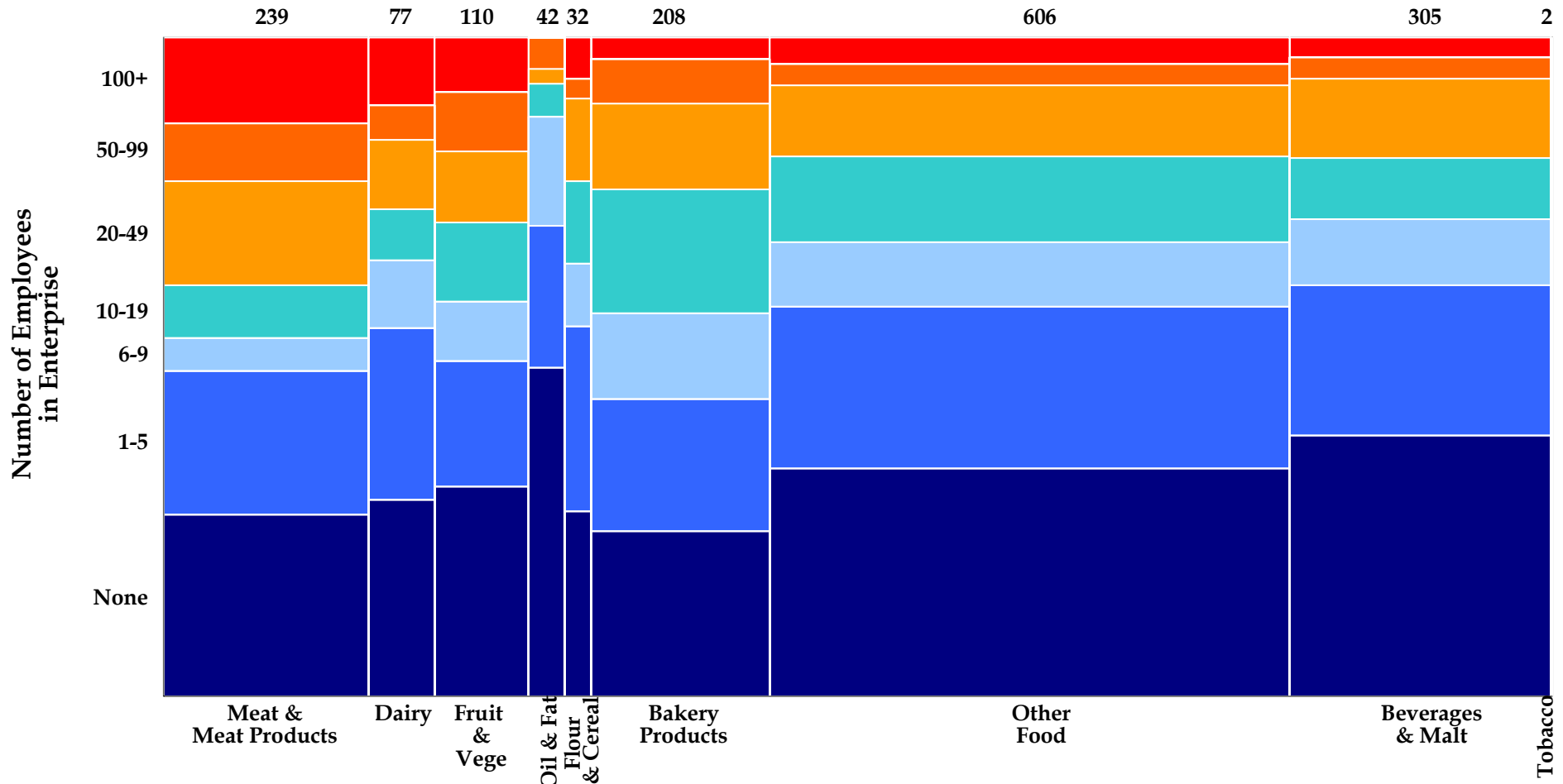


# NUMBER OF MANUFACTURING ENTERPRISES BY BUSINESS EMPLOYMENT SIZE

The New Zealand food and beverage manufacturing sector is made up of a wide range of sizes (as defined by number of employees)

Food & Beverage Manufacturing Enterprises by Employment Size by Sector (enterprises, actual, 2004)

Uses 2004 data unlike rest of document

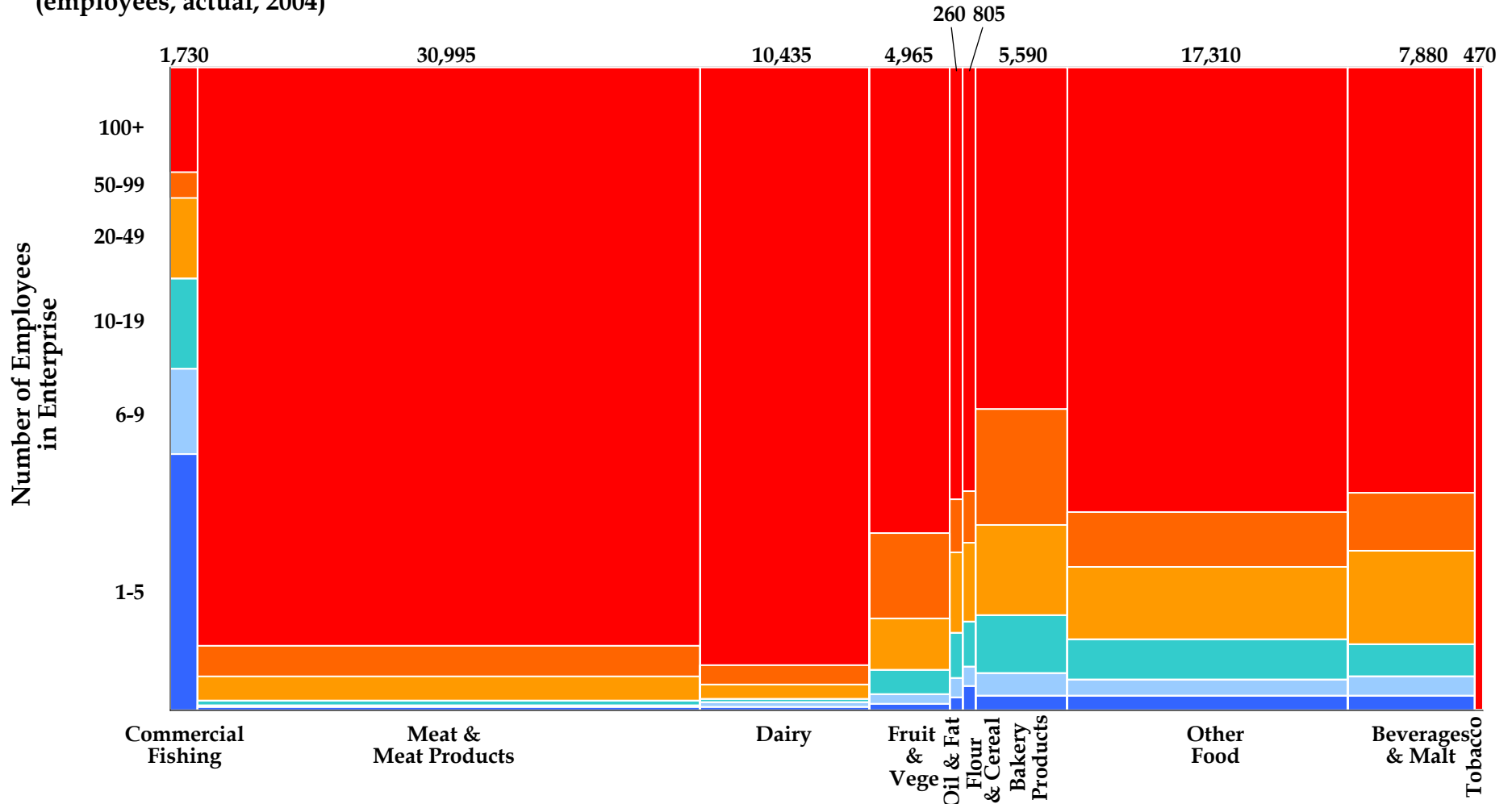


# MANUFACTURING EMPLOYMENT BY BUSINESS EMPLOYMENT SIZE BY SECTOR

However, the vast majority of employed people work in the large companies

Food & Beverage Manufacturing Employment By Sector  
(employees, actual, 2004)

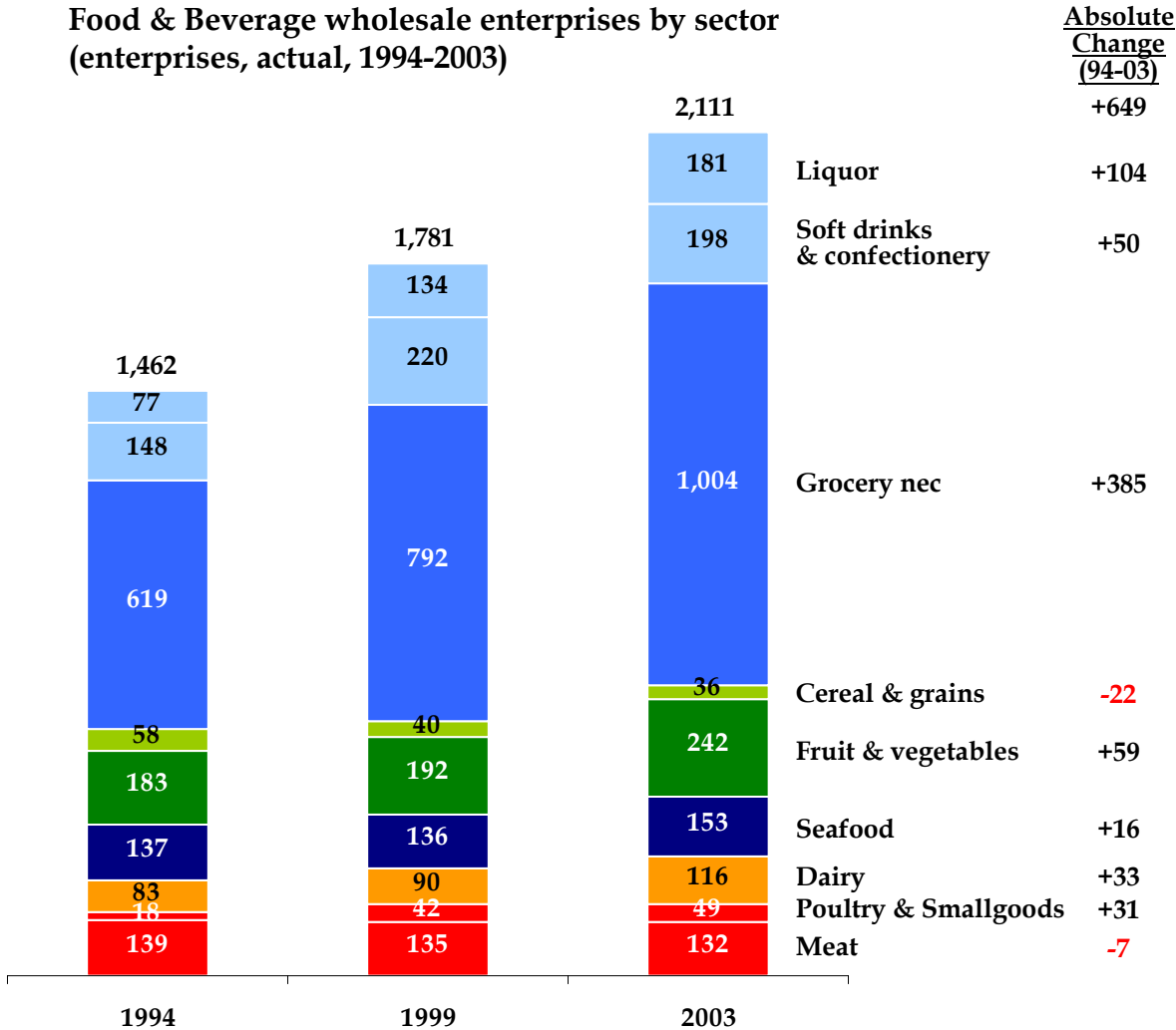
Uses 2004 data unlike rest of document



# NUMBER OF FOOD WHOLESALING ENTERPRISES

The number of food wholesalers is increasing, except cereal & grains and meat

Food & Beverage wholesale enterprises by sector  
(enterprises, actual, 1994-2003)



### Discussion Points

- More smaller importers?

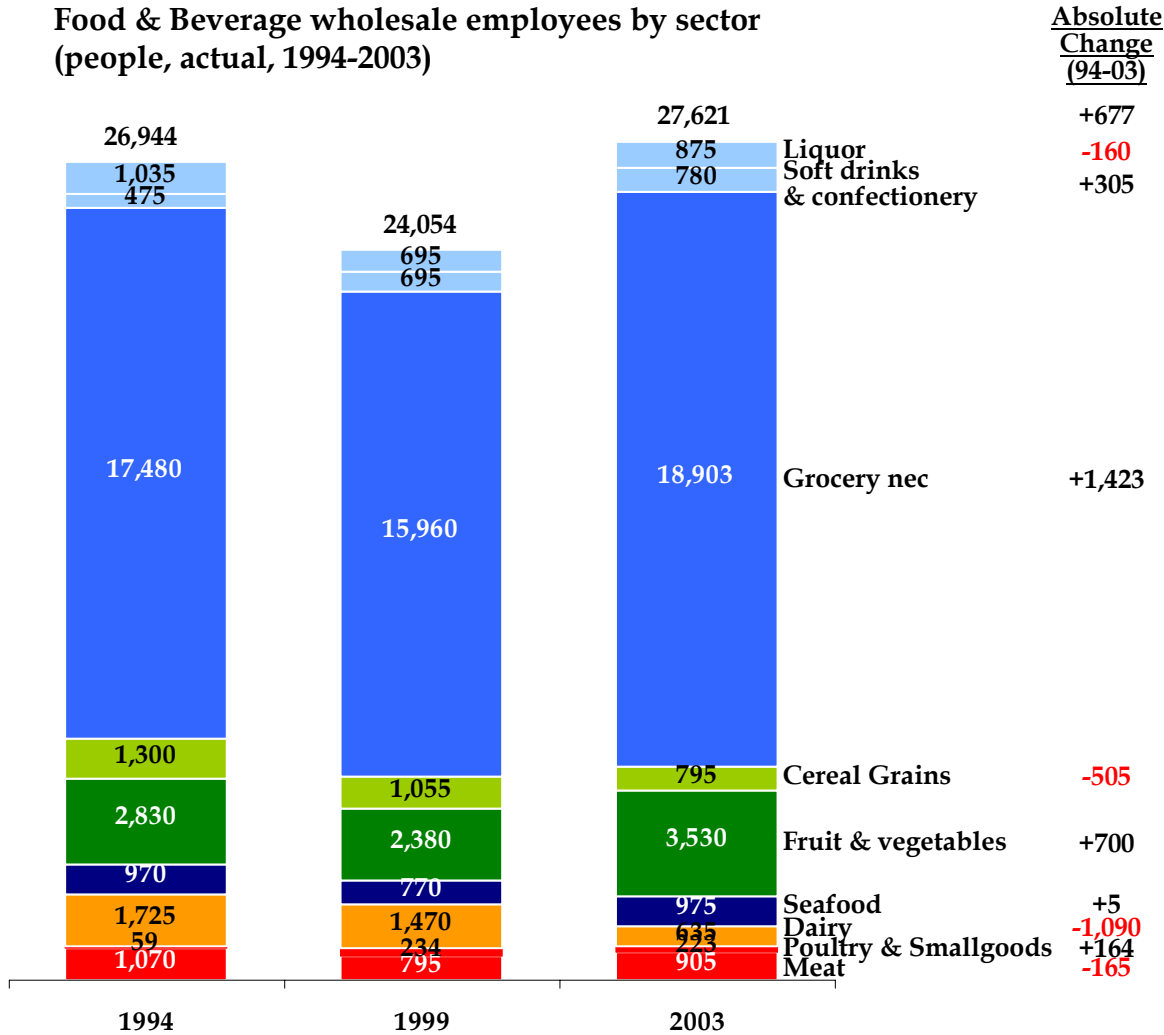
### Notes

- Defined as businesses registered for GST purposes (+\$30,000pa)

# NUMBER OF FOOD WHOLESALING EMPLOYEES

Three sectors are generating the bulk of food wholesaling employment growth: grocery nec, fruit & vegetables and soft drinks and confectionery

Food & Beverage wholesale employees by sector  
(people, actual, 1994-2003)



Absolute Change (94-03)

+677

-160

+305

+1,423

-505

+700

+5

-1,090

+164

-165

## Discussion Points

- 

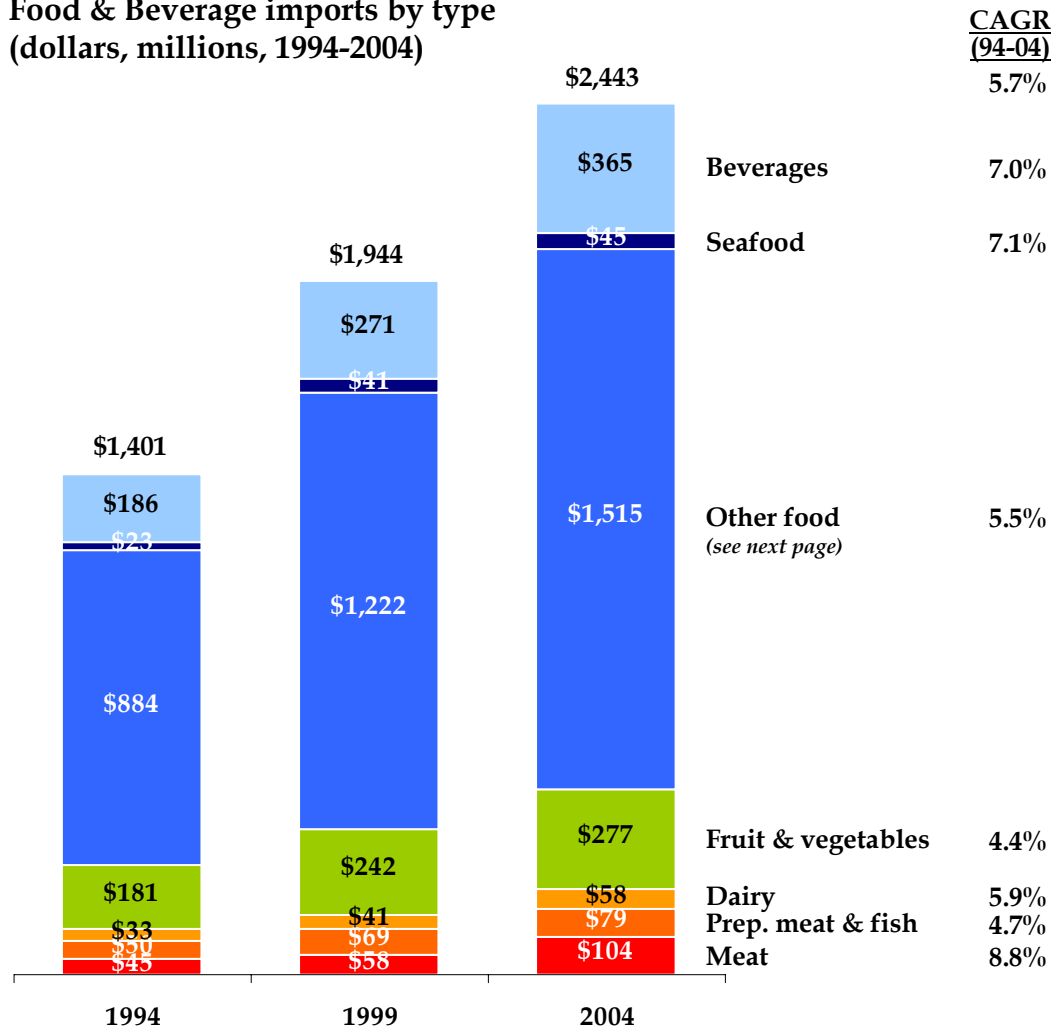
## Notes

- Includes working proprietors
- Total employees not FTE
- Nec: not elsewhere classified (ie generalists)

# FOOD & BEVERAGE IMPORTS

Food and beverage imports are showing moderate growth, primarily in “other food”

Food & Beverage imports by type  
(dollars, millions, 1994-2004)



## Discussion Points

- Growth of meat imports (primarily pork)

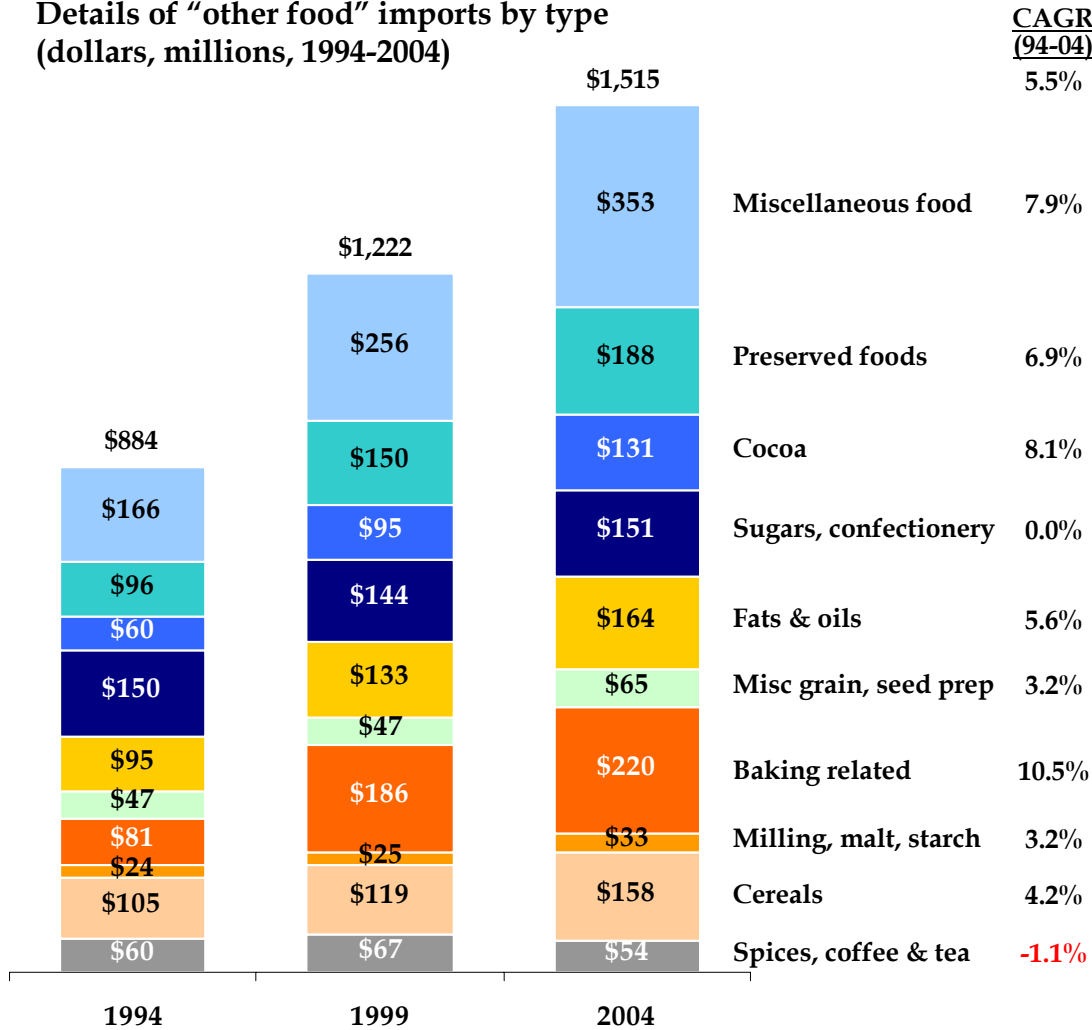
## Notes

- Uses HS2 codes
- Dairy includes ice cream but excludes honey and eggs (in other food)
- Meat is primarily pork (\$73m in 2004)
- Actual NZ dollars; not inflation adjusted

# OTHER FOOD IMPORTS

“Other food” captures a range of food ingredients and products

Details of “other food” imports by type  
(dollars, millions, 1994-2004)



## Discussion Points

- Increasing imports of grain based products
- Growth of cocoa, misc. foods and preserved foods
- Growth of baking related (e.g. biscuits)

## Notes

- Uses HS2 codes (with adjustments from prior page)
- “Baking related” (HS19) includes pasta, biscuits and other processed grain products

### 3. MARKETS

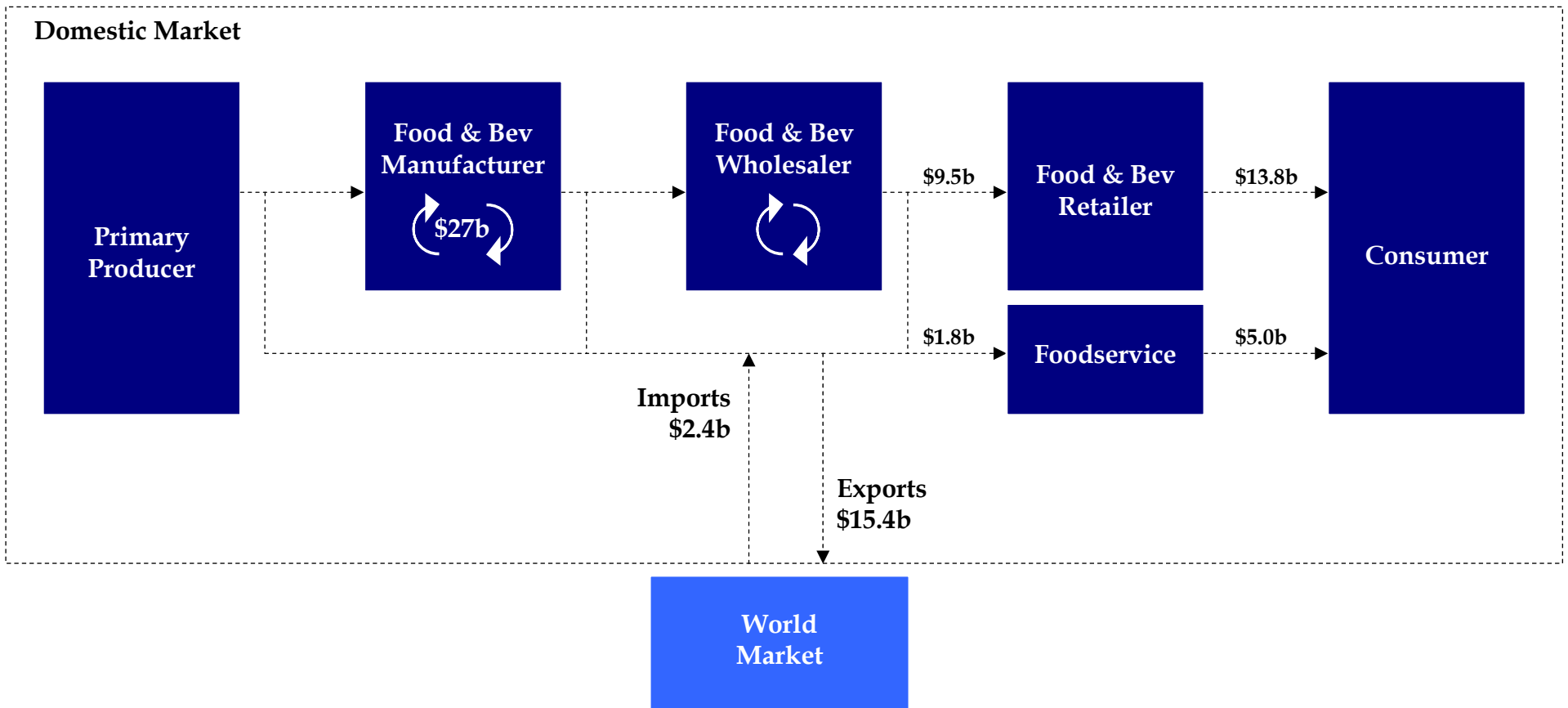
The third section of this overview looks at markets for our foods and beverages



# INDUSTRY STRUCTURE

The New Zealand food & beverage sector has both a domestic and an export component

Structure of the New Zealand food industry (model)

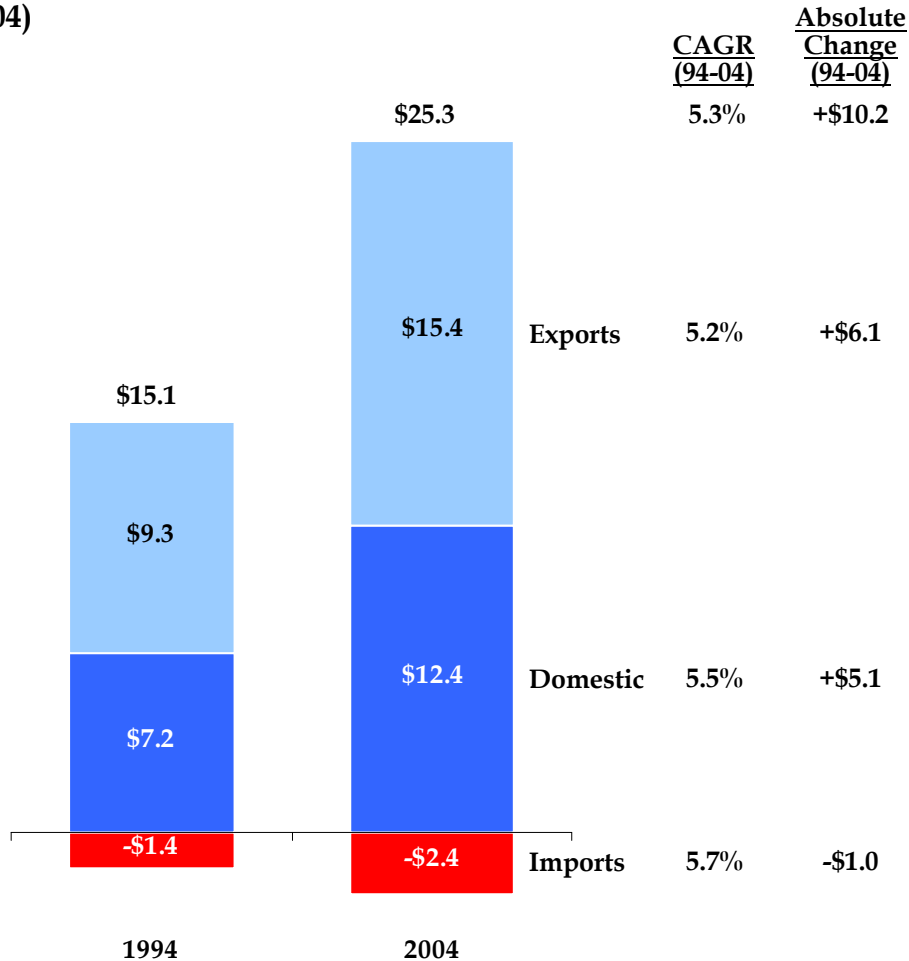




## TURNOVER GROWTH: DOMESTIC VS. EXPORT VS. IMPORTS

Net of imports, industry output has grown by \$10.2 billion over the last ten years, (to \$25.3 billion sales in 2004), an average compound rate of growth of 5.3% in nominal terms

Total New Zealand food & beverage turnover growth by type  
(NZ\$, b, 2004)



### Discussion Points

- Imports growing faster than exports

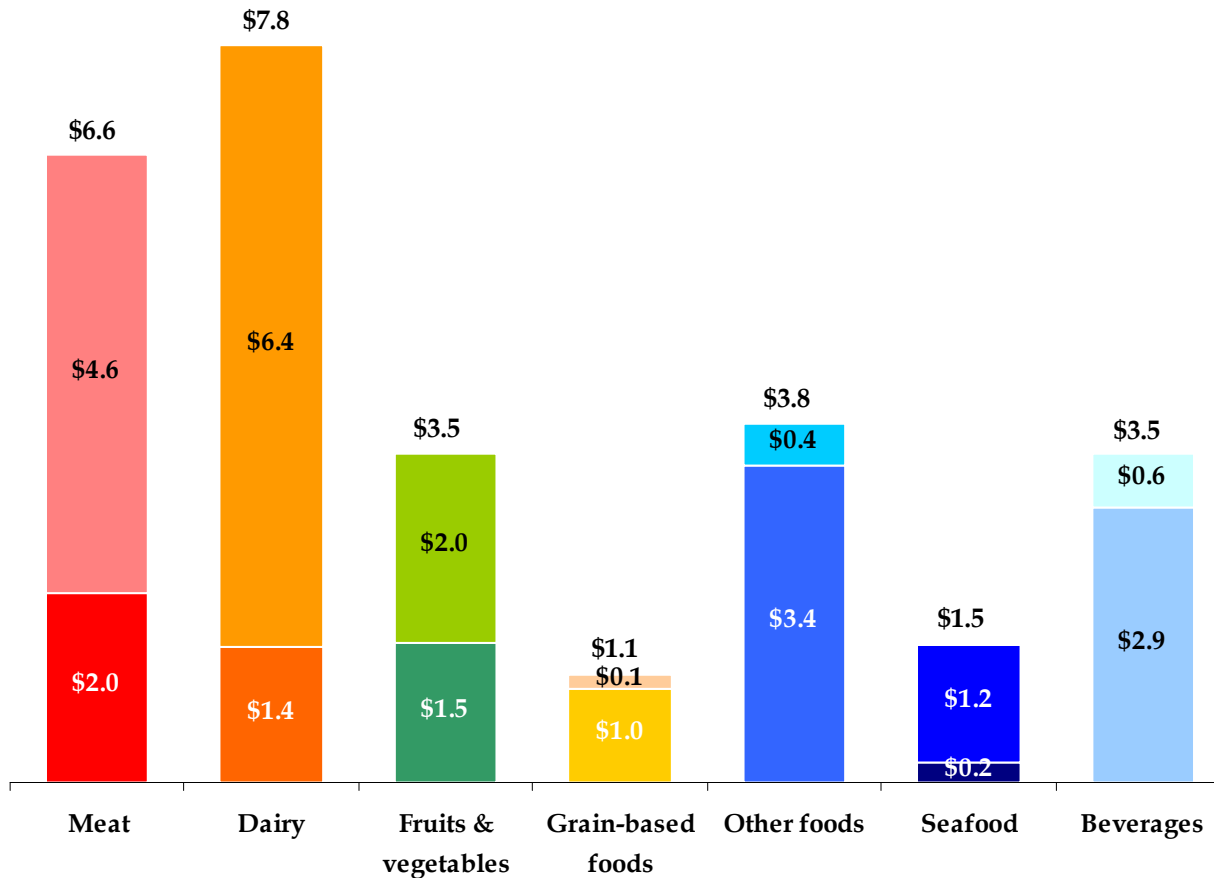
### Notes

- Represents wholesale sales into domestic retail and foodservice markets not retail sales to customers and import/export value at border
- Domestic includes imports (effectively double counted); domestic production for domestic use would subtract imports less import wholesalers margins
- For details see complete document; significant footnotes exist for various numbers

## DOMESTIC VS. EXPORT

The relative strength of the domestic and exports components varies significantly by sector

Total New Zealand food & beverage turnover by segment (NZ\$, b, 2004)



### Discussion Points

- Role of comparative advantage
- What is required to build another \$1 billion export sector? Which segment of “other” is the most likely candidate?
- Is innovation coming from the domestic or export sector?

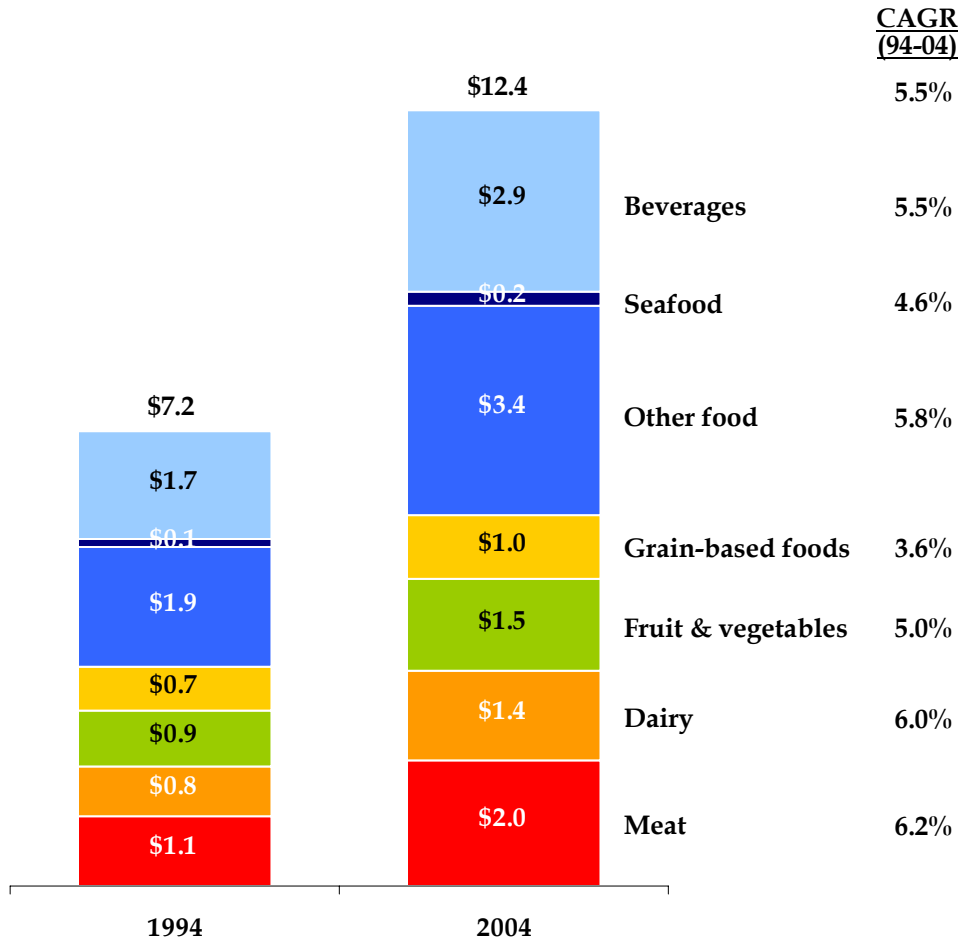
### Notes

- Represents wholesale sales into domestic retail and foodservice markets not retail sales to customers; Assumes one export dollar = one wholesale dollar to retail
- Domestic includes significant imports
- For details see complete document; significant footnotes exist for various numbers

# FOOD & BEVERAGE DOMESTIC MARKET BY SECTOR

The domestic food and beverage industry has grown at a compound rate of 5.5% over the past decade

Domestic food & beverage market by sector at wholesale (dollars, millions, 1994-2004)



### Discussion Points

- Relative importance of other food and beverages (vs. exports)

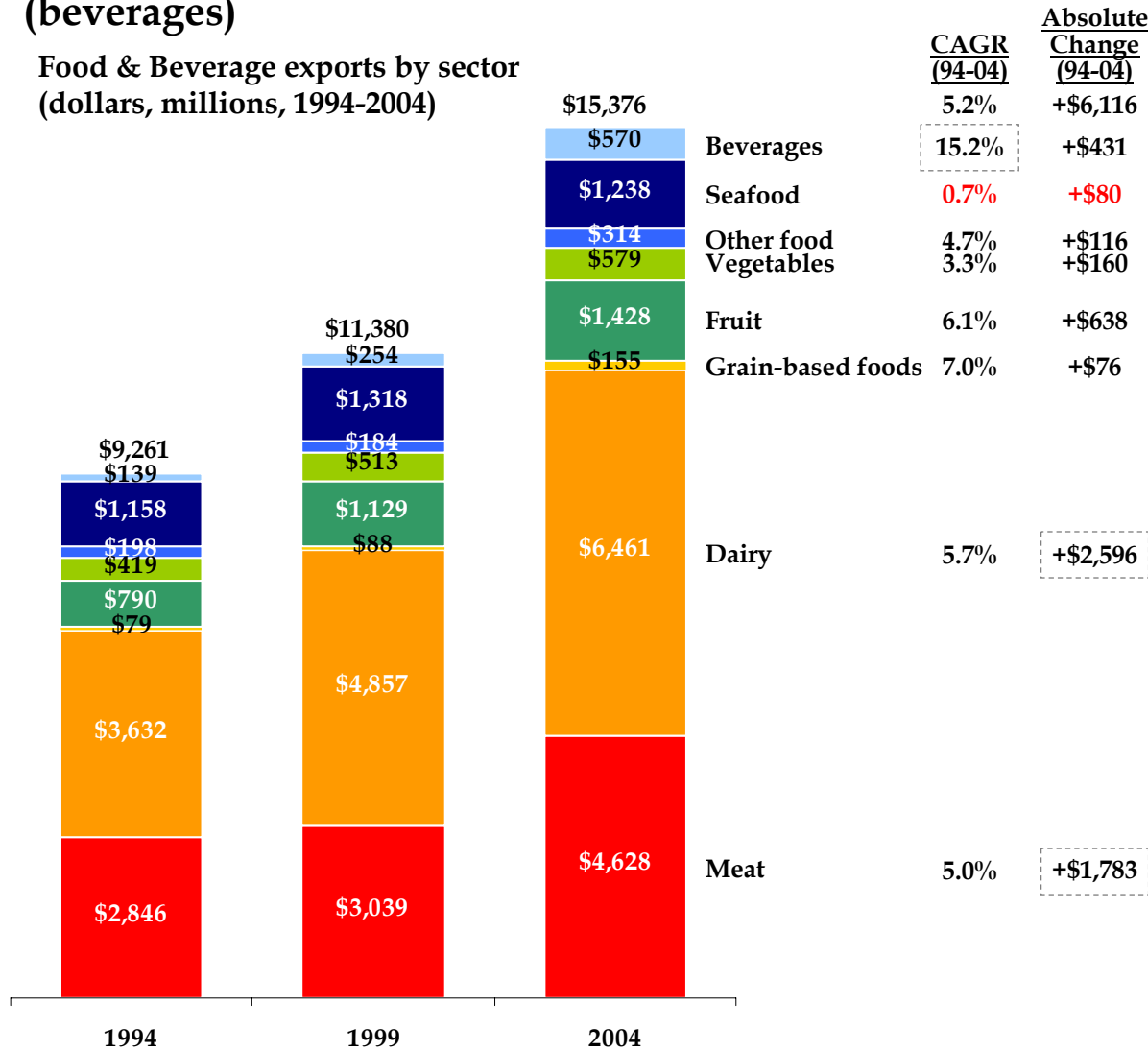
### Notes

- Represents wholesale sales into domestic retail and foodservice markets not retail sales to customers
- Revised category classifications and data from earlier document based on additional analysis to including better data on alternative channels (e.g. hospitality)
- For details see complete document

# FOOD & BEVERAGE EXPORTS BY SECTOR

Two sectors stand out for absolute growth (dairy and meat) and one for rate of growth (beverages)

Food & Beverage exports by sector (dollars, millions, 1994-2004)



## Discussion Points

- Heavy reliance on livestock-based food exports
- Growth in beverages coming from wine

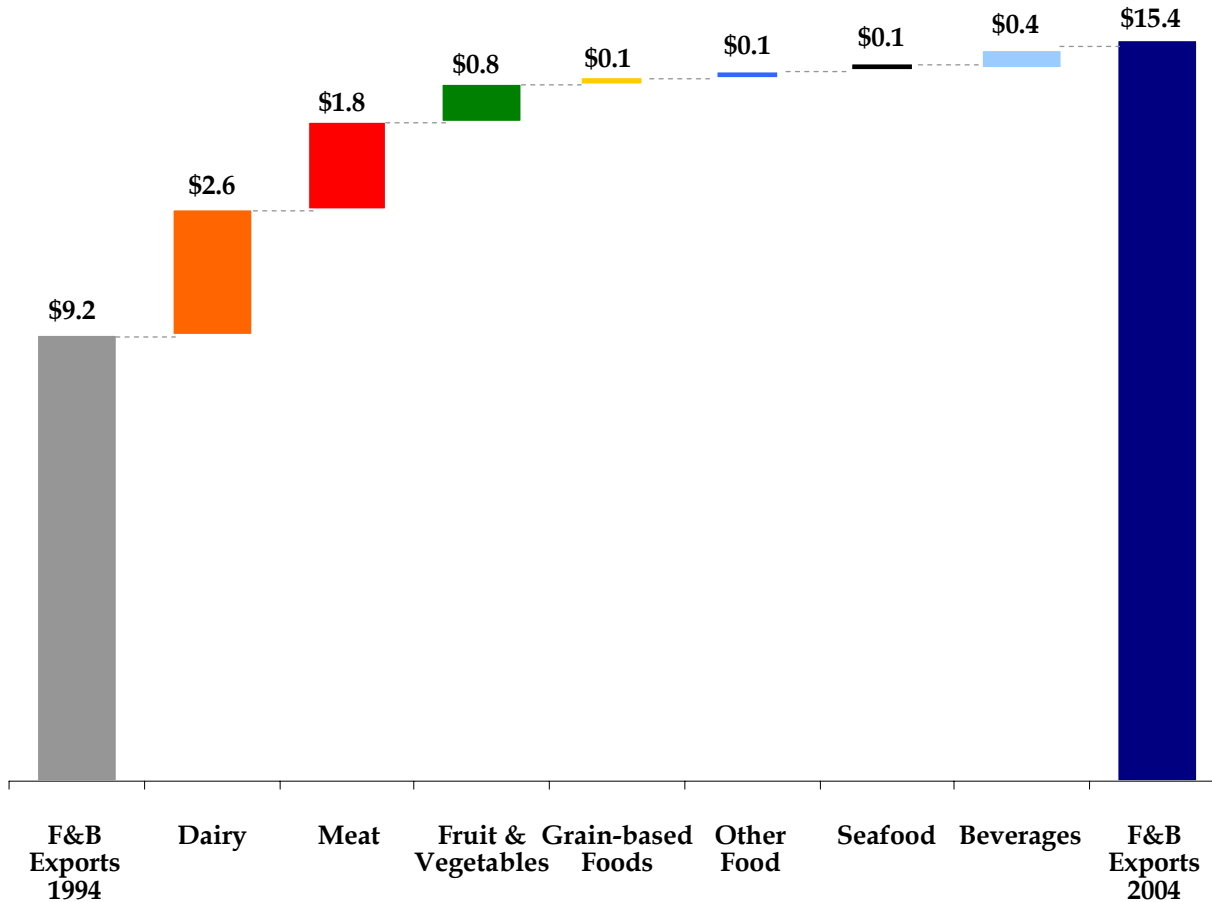
## Notes

- Revised classifications:
  - Meat now includes canned/preserved meat (HS1601-1602)
  - Seafood now includes canned/preserved seafood (HS1603-1605)
  - Dairy now includes ice cream (HS2105), dairy protein (HS2106), Casein(HS3501) and albumin (HS3502) and excludes honey (HS0407) and eggs(HS0409)
  - Fruit & vegetables now includes preserved f&v (HS2001-2008), but excludes Wine (HS2204-2206)
  - Beverages includes HS22 (all), fruit juices (HS2009) and Wine (HS2204-2206)
  - Oils and fat prim. meat fat; excl. butter
  - Addition of non-food dairy (casein/albumins) has increased total
  - Excludes other of animal origin (HS05)

## CONTRIBUTORS TO EXPORT VALUE GROWTH

Much of the food and beverage industry's growth over the past decade has been driven by a small number of product group segments

Contributors to food and beverage export value growth over the last decade  
(NZ\$, b, 1994-2004)



### Discussion Points

- Do the performing sectors have the capability to grow in the next decade?

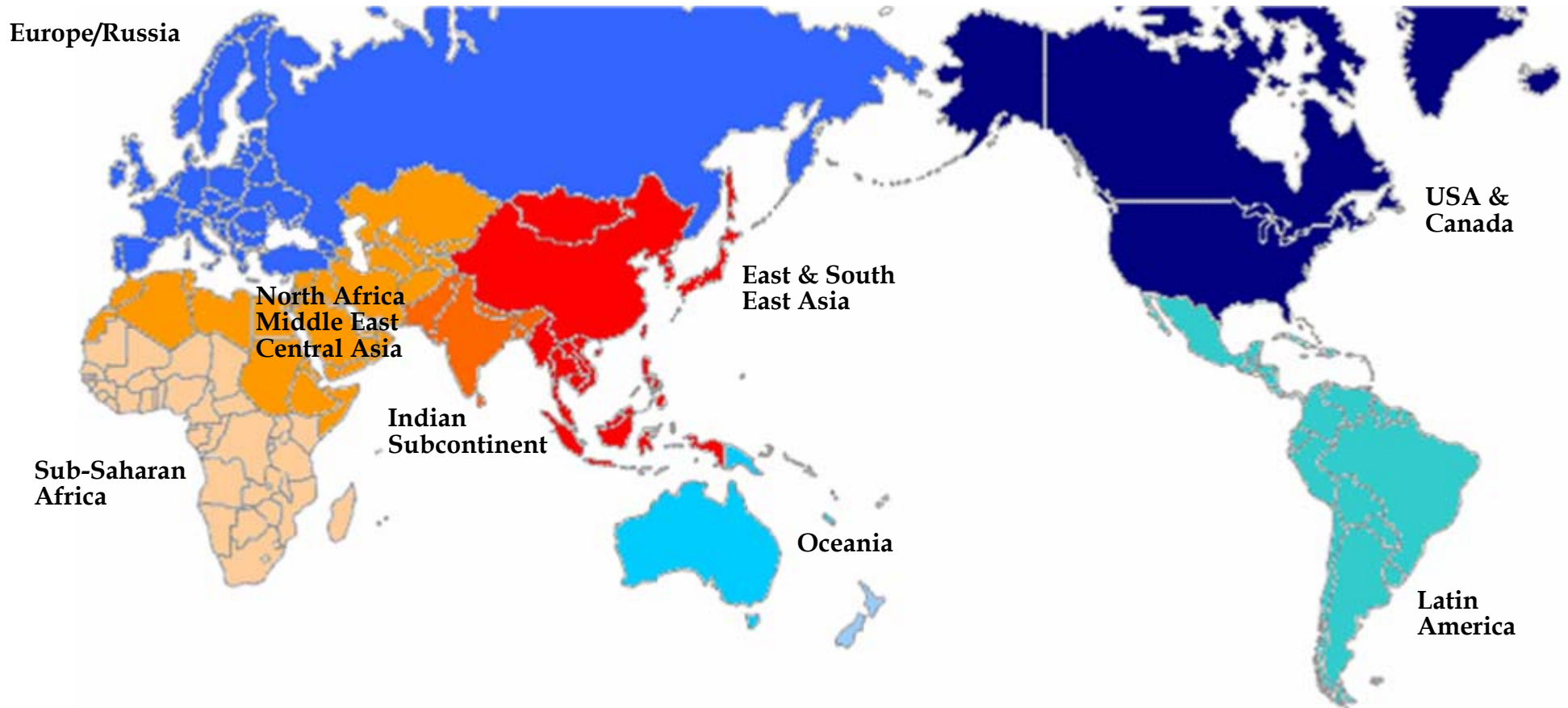
### Notes

- Not inflation or exchange rate adjusted

## GLOBAL MARKET SEGMENTATION

For the purposes of this analysis, the world market was segmented into eight cultural mega-regions

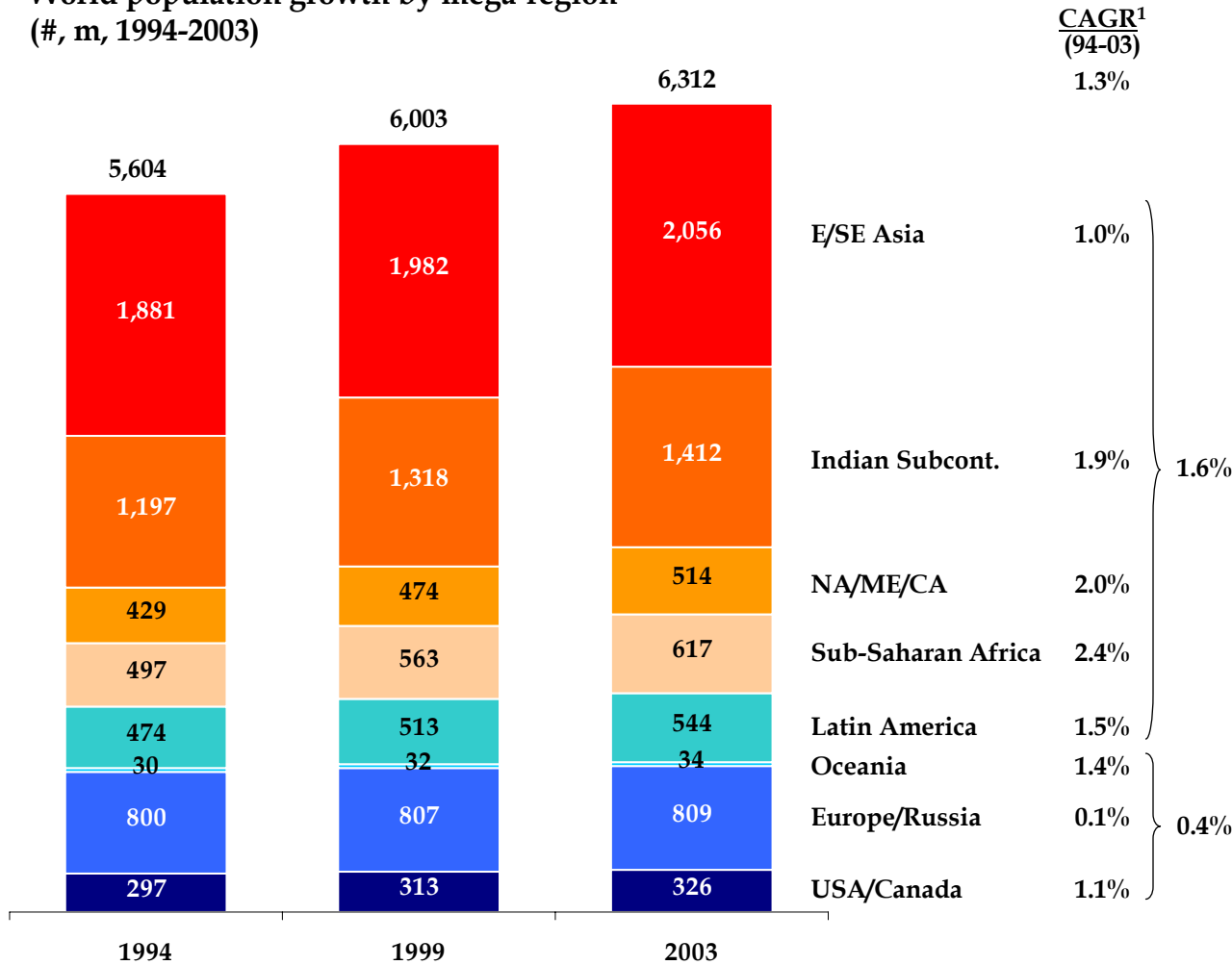
Segmentation of world markets into cultural mega-regions  
(model)



# POPULATION GROWTH BY MEGA-REGION

Populations and population growth varies widely by mega-region with implications for current and future market sizes

World population growth by mega-region  
(#, m, 1994-2003)



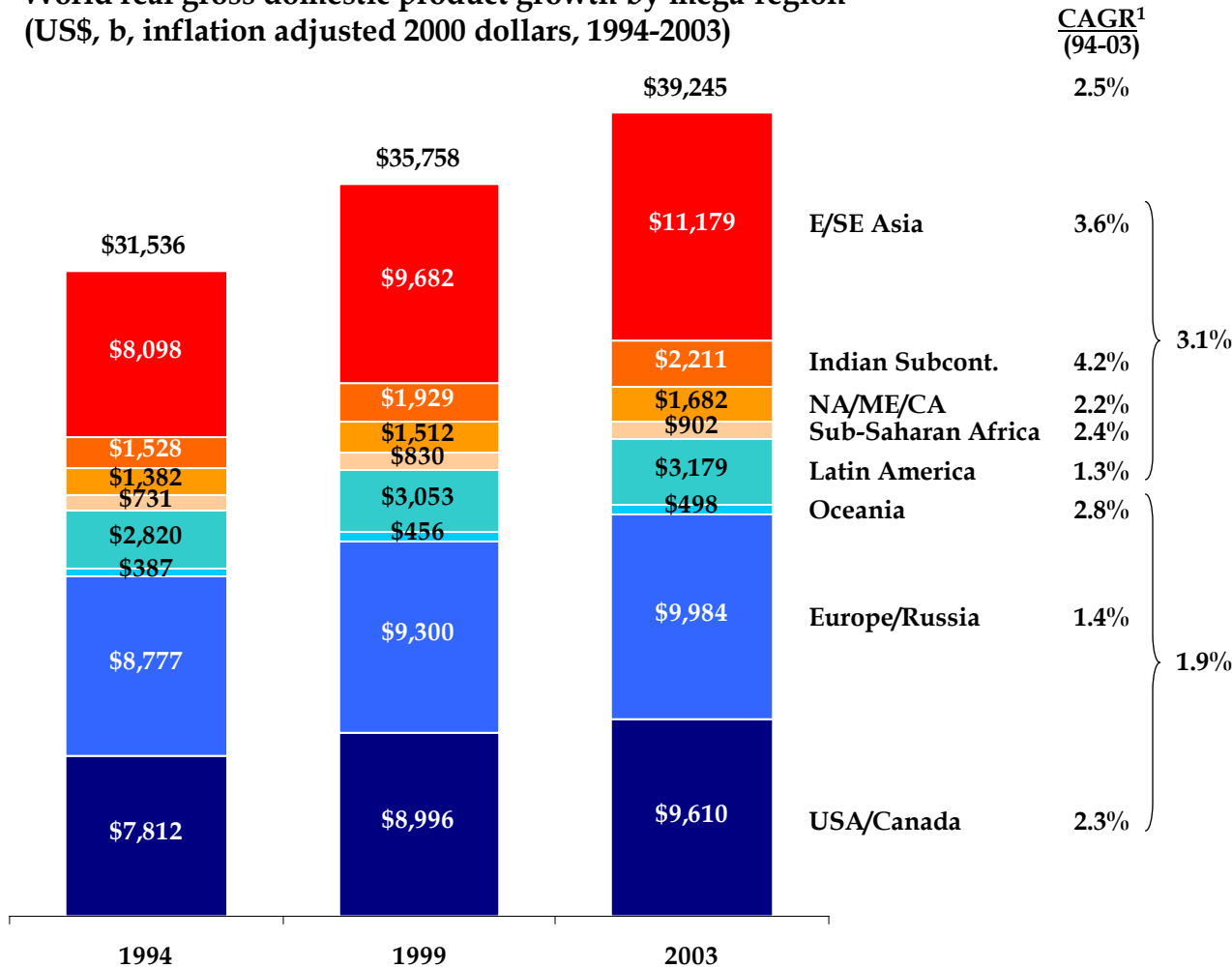
## Discussion Points

- Where are the markets of the future?
- What do they want that we can produce?

## GDP GROWTH BY MEGA-REGION

World GDP and GDP growth rates, in real (inflation-adjusted) US dollars, vary significantly by region, with Asia being the standout in terms of total wealth creation

World real gross domestic product growth by mega-region  
(US\$, b, inflation adjusted 2000 dollars, 1994-2003)



### Discussion Points

- How do we sell more to Asia? What do they want that we can produce?

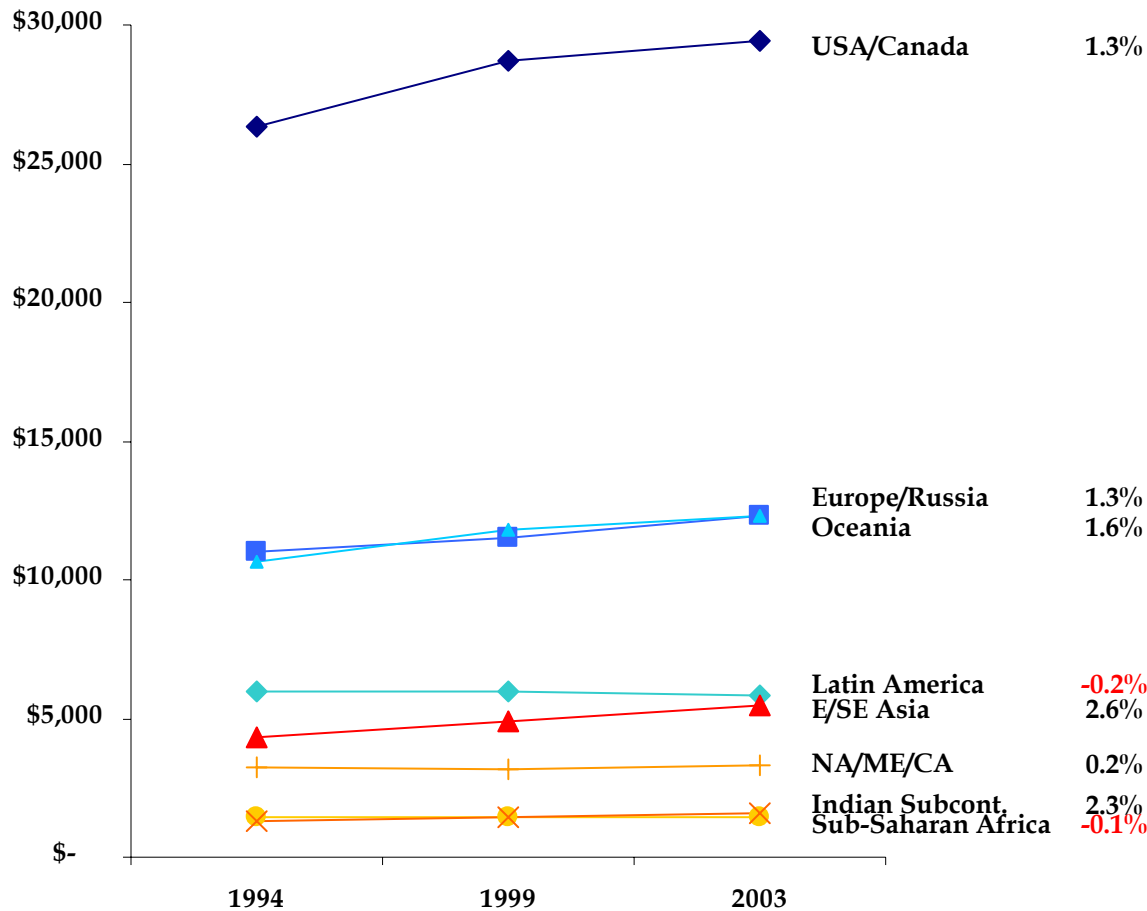


## GDP PER CAPITA GROWTH BY MEGA-REGION

Asia and the Indian Subcontinent are the only regions to achieve real GDP per capita growth over 2% - Latin America and Sub-Saharan Africa are going backwards

World real gross domestic product per capita growth by mega-region (US\$, per person, inflation adjusted 2000 dollars, 1994-2003)

CAGR  
(94-03)



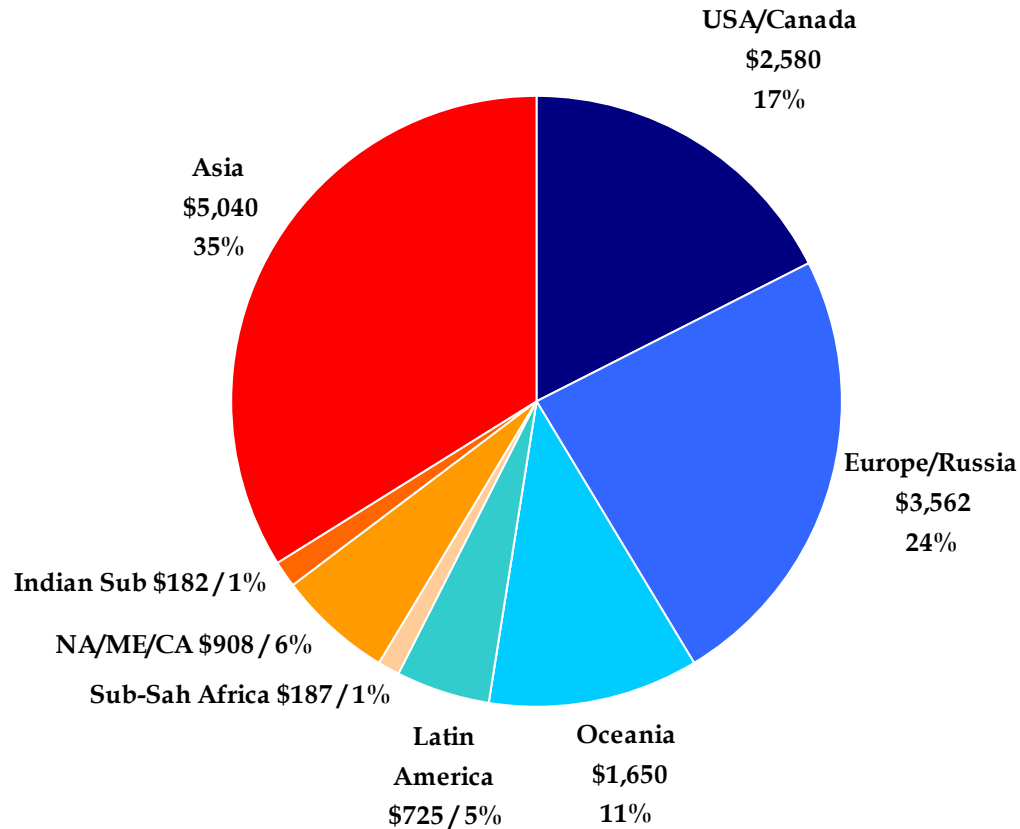
### Discussion Points

- Will Latin America turn around?
- How long will it take Asia to reach developed world income levels?
- Do the food and beverages that New Zealand produces have a “take-off point” in terms of GDP/Capita?

# TOTAL FOOD AND BEVERAGE EXPORTS VALUE BY MEGA-REGION

New Zealand exported \$14.8 billion in food and beverages last year – most of which went to traditional Northern Hemisphere markets and Asia

Total New Zealand food and beverage export value by mega-region  
(NZ\$, m, 2004)



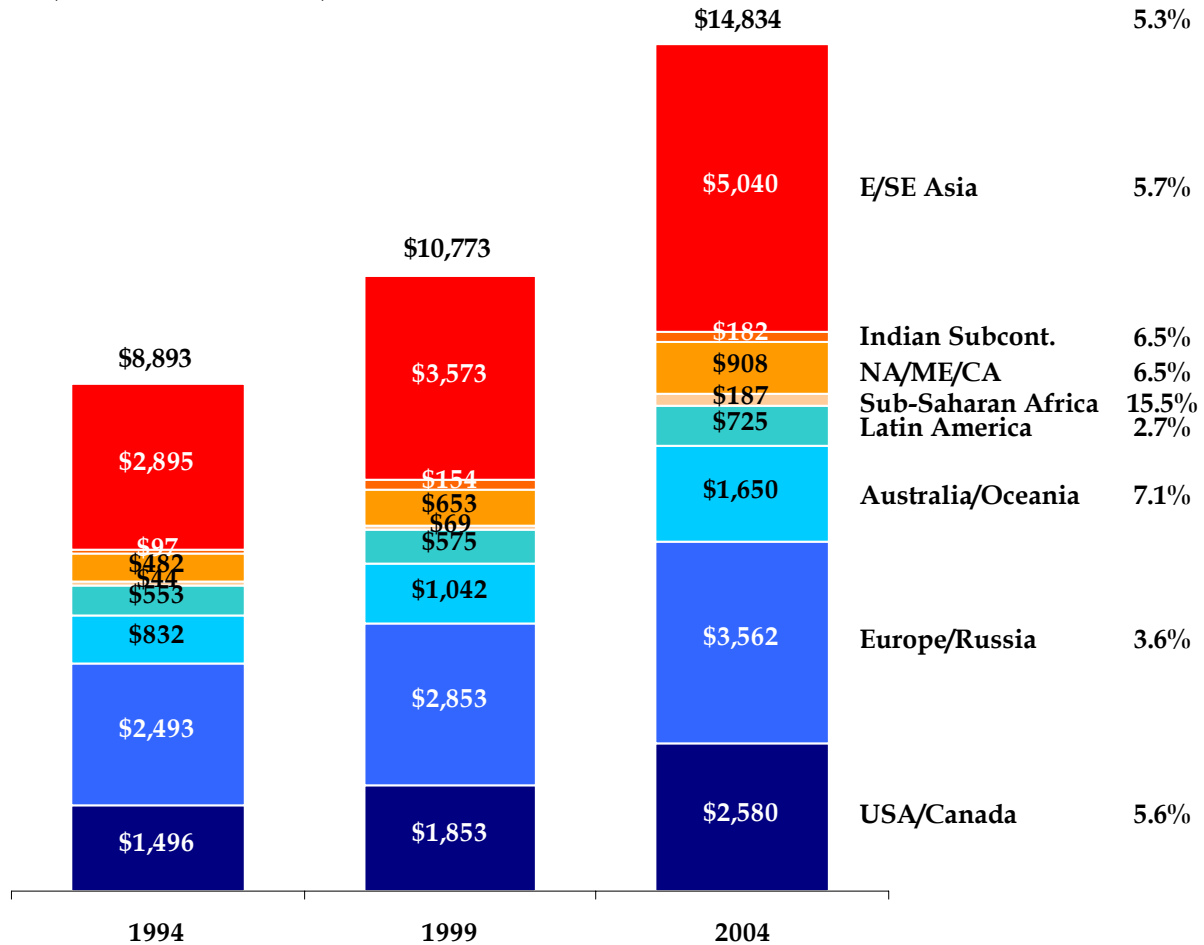
**TOTAL = NZ\$14,834m**

*Will not match total on earlier page; excludes non-food dairy (casein & albumins) and inclusion of some pet food (to simplify analysis)*

# TOTAL FOOD AND BEVERAGE EXPORTS VALUE GROWTH BY MEGA-REGION

Total New Zealand food and beverages exports have grown at a compound rate of 5.3% per annum over the past decade

Total New Zealand food and beverage export value by mega-region (NZ\$, m, 1994-2004)



## Discussion Points

- Why aren't exports to Asia growing faster given this region's strong growth?
- Exports to Australia/Oceania have doubled in the past decade - what needs to happen for this to continue?
- Why is the slowest growth to Europe, given it is one of our traditional markets?

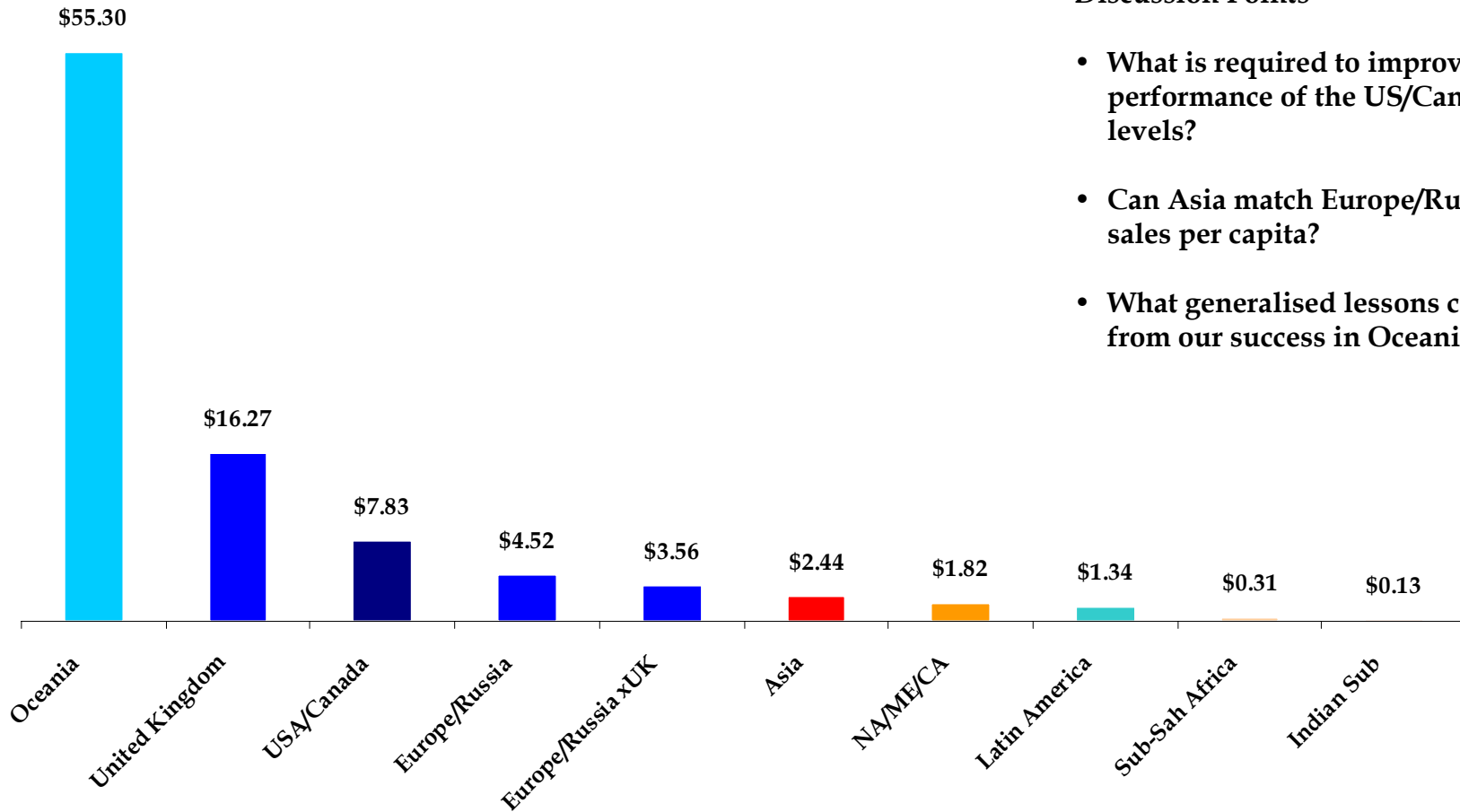
## Notes

- Will not match total on earlier page; excludes non-food dairy (casein & albumins) and inclusion of some pet food (to simplify analysis)

## EXPORT DOLLARS PER CAPITA BY REGION

On a per capita basis, New Zealand exports perform well in close markets and in our traditional markets, which are culturally similar, English-speaking countries

New Zealand food and beverage export value per capita by mega-region (NZ\$, 2004)



### Discussion Points

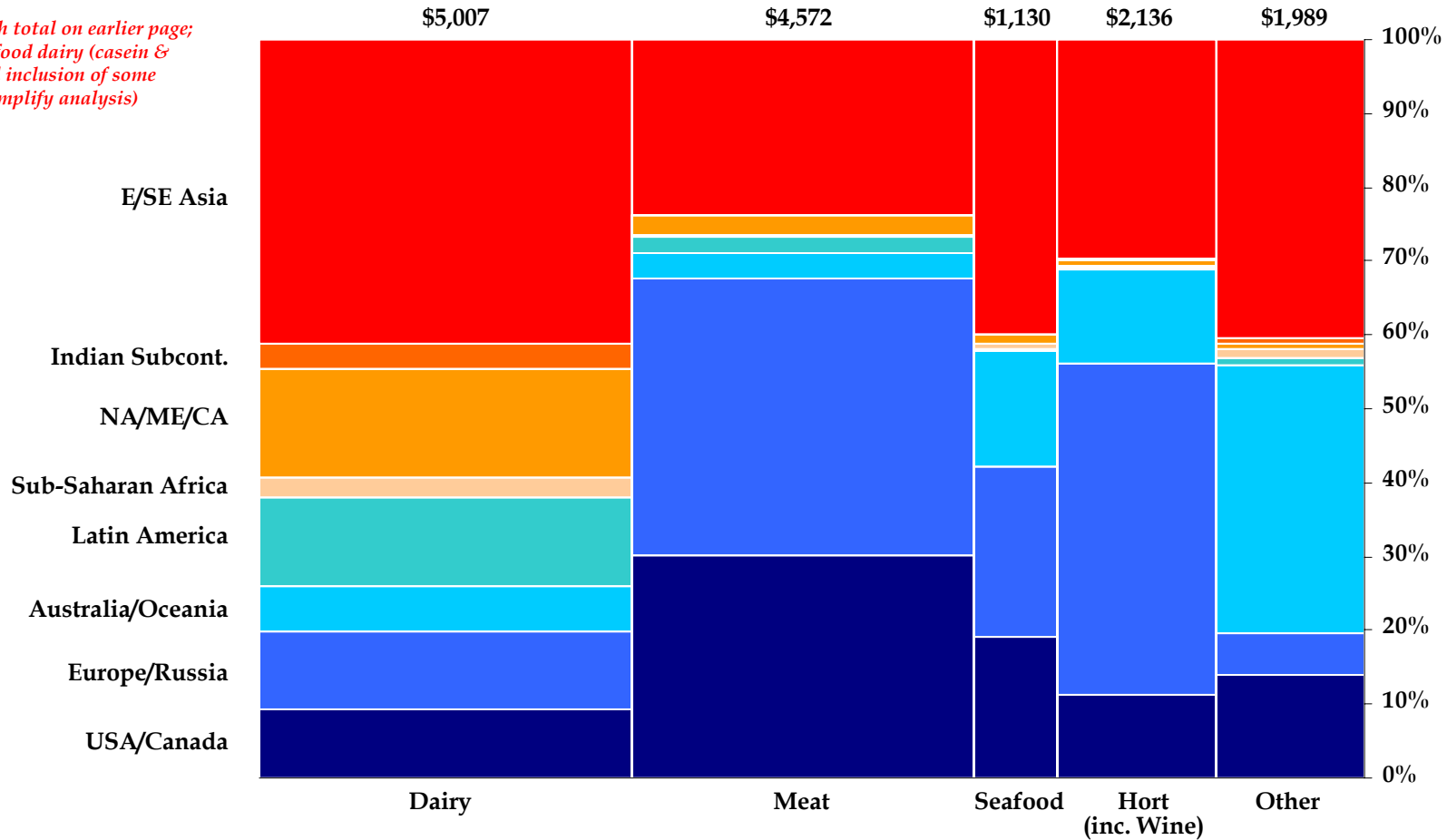
- What is required to improve the performance of the US/Canada to UK levels?
- Can Asia match Europe/Russia ex. UK sales per capita?
- What generalised lessons can we draw from our success in Oceania?

# EXPORT DESTINATION MATRIX

Two products – dairy and meat – and three markets – Asia, Europe and the US/Canada – are critical to New Zealand

Total New Zealand Food & Beverage exports by super region  
(NZ\$, m, 2004)

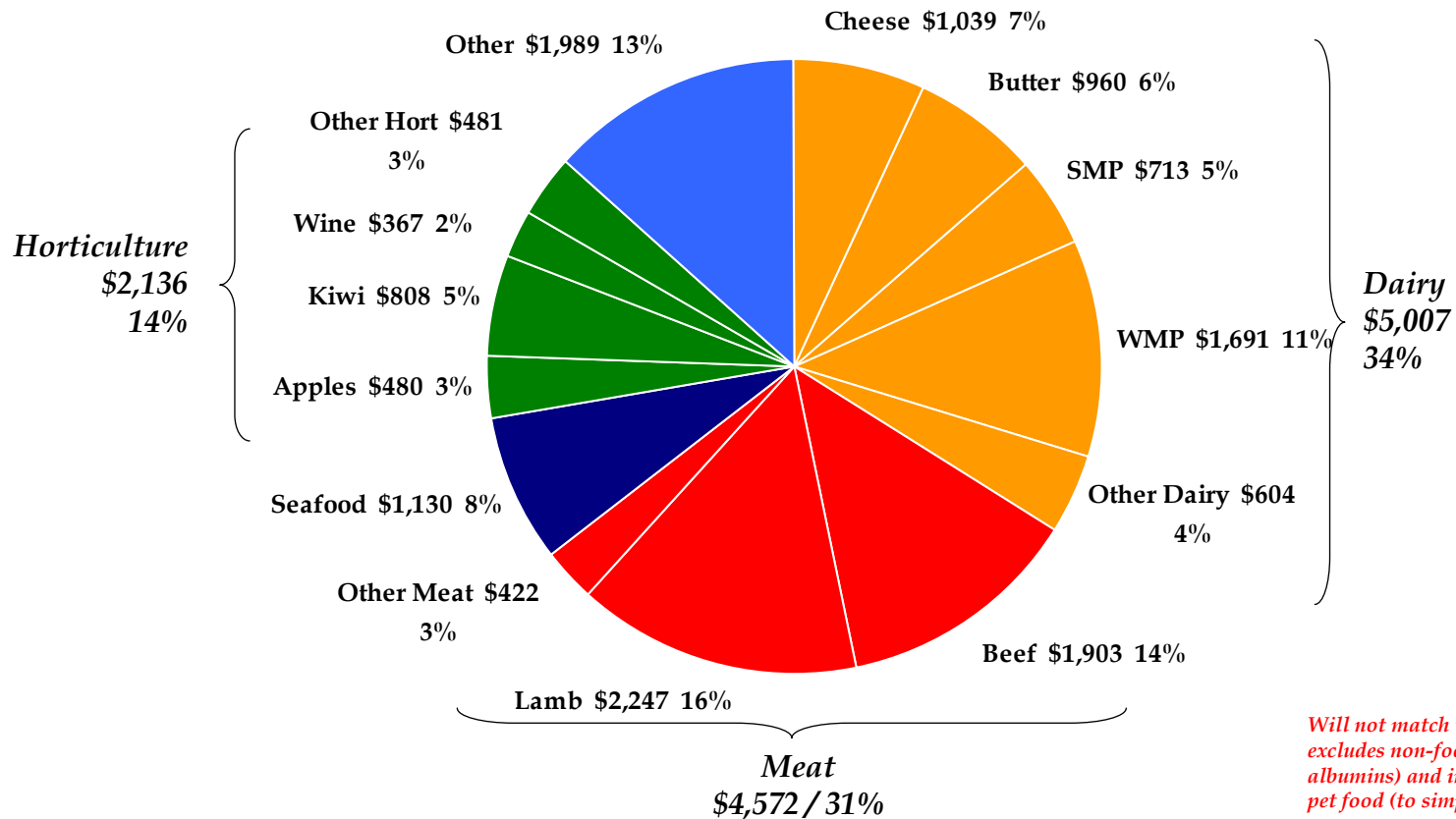
*Will not match total on earlier page; excludes non-food dairy (casein & albumins) and inclusion of some pet food (to simplify analysis)*



## EXPORT VALUES BY PRODUCT SEGMENT

In addition, New Zealand export food and beverage sales are highly dependent on a small number key sectors within those segments

Total New Zealand food and beverage export value by product segments  
(NZ\$, m, 2004)



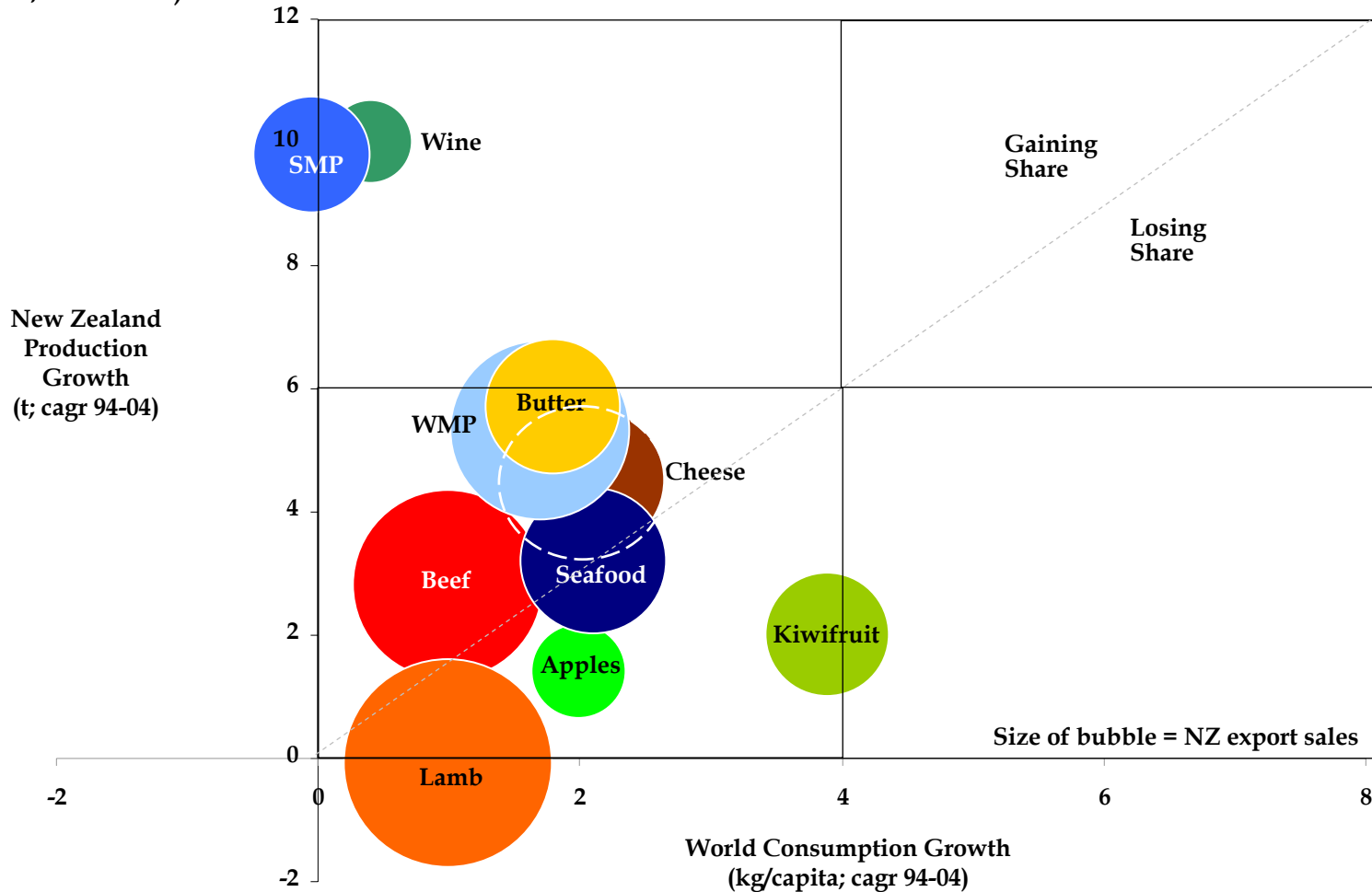
*Will not match total on earlier page; excludes non-food dairy (casein & albumins) and inclusion of some pet food (to simplify analysis)*

TOTAL = NZ\$14,834m

# GLOBAL CONSUMPTION VS. NZ PRODUCTION GROWTH

While New Zealand's major exports are in low growth categories, in many cases it is gaining production share

World consumption growth vs. New Zealand production growth for major exports  
(%, CAGR, 1994-2004)



## TOTAL MARKET VIEW

### The New Zealand food and beverage industry faces challenges in many of its key sectors

Performance scorecard of the New Zealand food & beverage industry by select key sector  
(various; 2004)

Select key food categories only (not a complete data set)	Dairy				Meat			Horticulture		
	Cheese	Butter/Ghee	SMP <sup>2</sup>	WMP <sup>2</sup>	Beef	Lamb	Seafood	Apples	Kiwifruit	Wine
Global per capita consumption growth (cagr; 61-04) <sup>1</sup>	2.3%	-0.8%	-0.1%	2.3%	0.2%	-0.6%	-0.7% <sup>3</sup> to 3.8%	0.7%	3.6%	n/a
Global production growth rate (cagr; 94-04) <sup>1</sup>	2.1%	1.8%	-0.04%	1.7%	1.0%	1.0%	2.1%	2.0%	3.9%	0.4%
New Zealand global production share (%; 2004)	1.6%	6.0%	12.3%	20.7%	1.2%	6.7%	0.05%	0.09%	19.1%	0.03%
New Zealand production growth (cagr; 94-04) <sup>1</sup>	4.0%	5.7%	9.8%	5.3%	2.8%	-0.1%	3.2%	1.4%	2.0%	10.0%
Global import growth from all countries (cagr; 94-04) <sup>1</sup>	4.6%	1.3%	-0.4%	3.6%	-6.7%	0.4%	n/a	3.3%	5.6%	3.5%
New Zealand export value (\$m; 04)	\$1,039	\$960	\$713	\$1,691	\$1,903	\$2,247	\$1,130	\$480	\$808	\$367
Total value growth (cagr; 94-04) <sup>1</sup>	6.0%	2.0%	5.5%	7.0%	3.8%	6.0%	0.5%	3.6%	9.4%	23.6%
- Europe/Russia	-1.2%	-2.6%	~	-18.6%	5.8%	5.4%	6.4%	4.0%	8.6%	16.8%
- USA/Canada	8.2%	41.3%	-15.8%	31.9%	1.7%	15.0%	-1.9%	4.1%	7.1%	43.5%
- E/SE Asia	7.8%	5.6%	6.5%	8.7%	7.3%	9.4%	-1.7%	0.9%	11.9%	21.9%
- Oceania/Australia	8.8%	8.2%	9.8%	1.8%	3.8%	0.8%	4.6%	3.7%	8.9%	35.6%



## STRATEGIC VALUE OF KEY SEGMENTS

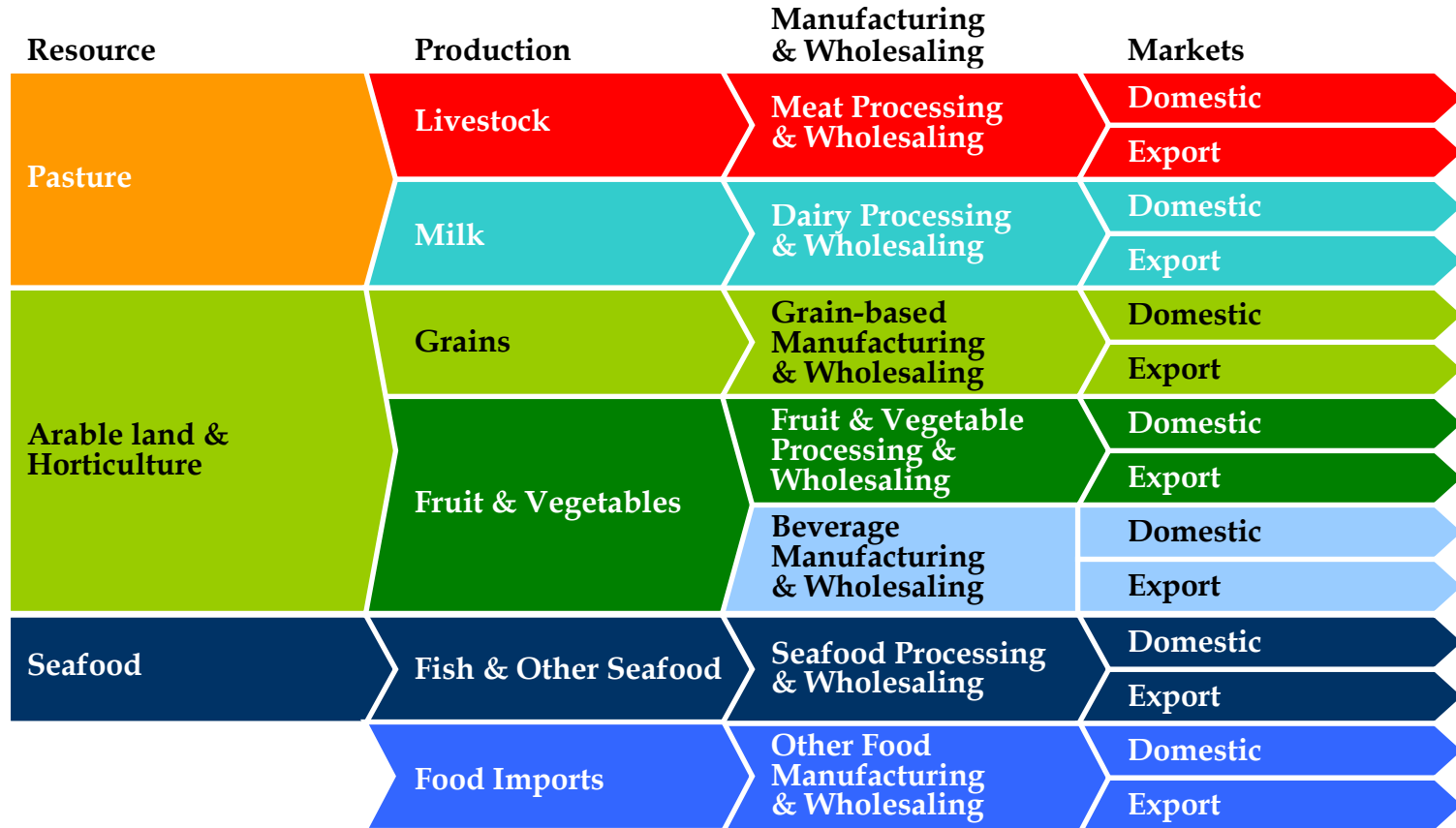
As it stands, the New Zealand Food & Beverage portfolio has a limited number of “stars”

Indicated strategic value of key segments  
(2004)

Segment	Value (\$m)	Share of total F&B exports (%\$)	Cumulative share of total exports (%\$)	Global per capita consumption growth	New Zealand Export Growth (%\$)	Indicated Strategic Value
Lamb	\$2,247	16%	16%	-0.6%	6.0%	Cash Cow
Beef	\$1,903	14%	30%	0.2%	3.8%	Cash Cow
Other F&B	\$1,989	13%	43%	n/a	7.3%	Rising Star
WMP	\$1,691	11%	54%	2.3%	7.0%	Star
Seafood	\$1,130	8%	62%	-0.7% to 3.8%	0.5%	Falling Star
Cheese	\$1,039	7%	69%	2.3%	6.0%	Star
Butter	\$960	6%	75%	-0.8%	2.0%	Cash Cow
Kiwifruit	\$808	5%	80%	3.6%	9.4%	Star
SMP	\$713	5%	85%	-0.1%	5.5%	Cash Cow
Other Dairy	\$604	4%	89%	n/a	n/a	?
Other Hort	\$481	3%	92%	n/a	n/a	?
Apples	\$480	3%	95%	0.7%	3.6%	Cash Cow
Other Meat	\$422	3%	98%	n/a	n/a	?
Wine	\$367	2%	100%	n/a	23.6%	Rising Star

## APPENDIX: MAPPING THE FOOD INDUSTRY

The food industry begins with three natural resources and ends with sales to domestic consumers or to export markets



# 1. PASTURE BASED PRODUCTION

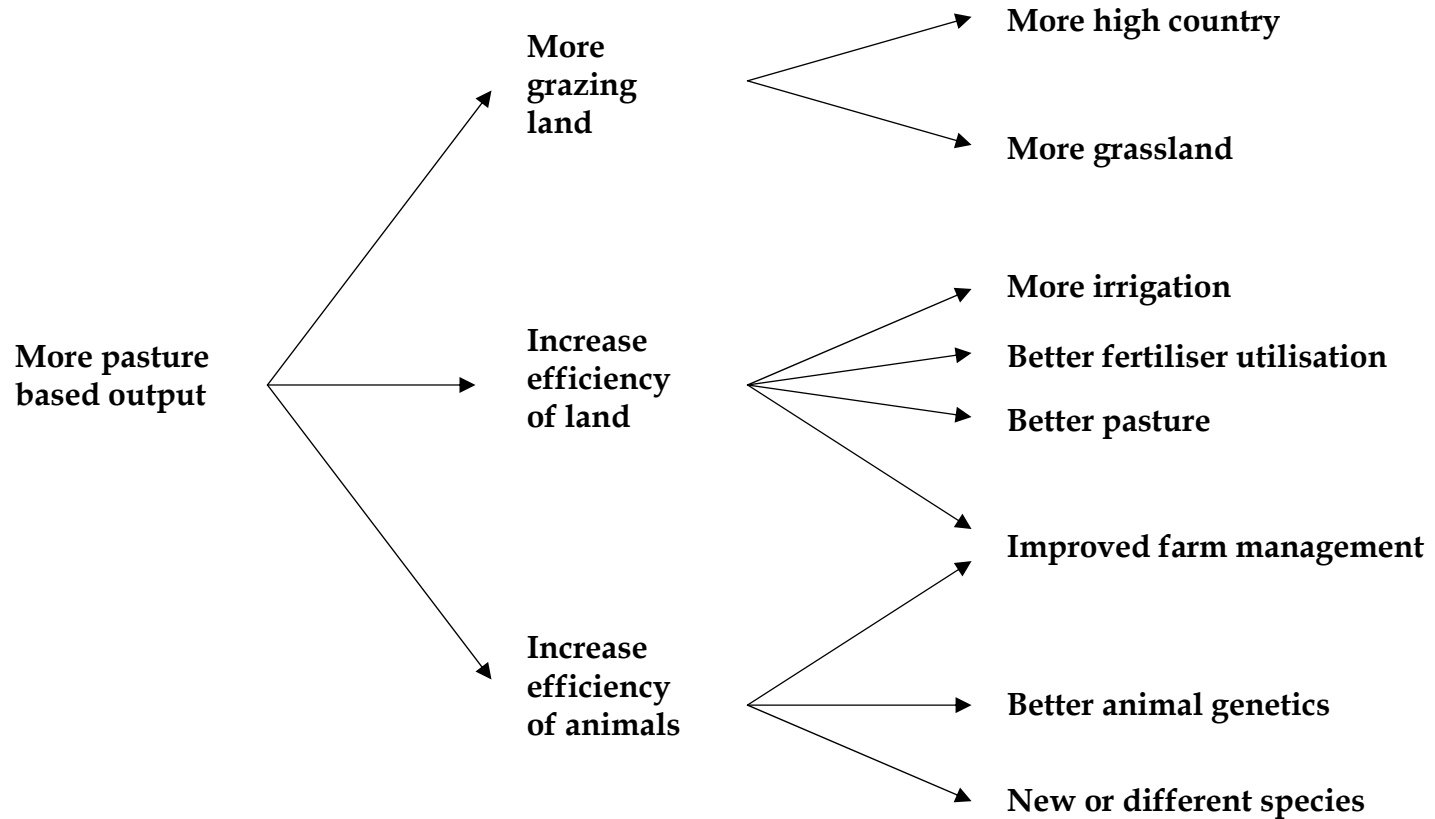
The first section of this report looks at pasture based production



# DRIVERS OF INCREASED PASTORAL AGRICULTURE OUTPUT

There are a limited number of drivers of increased output from pastoral agriculture

Key drivers of change in pasture-based land output (model)



## POTENTIAL FOR TRANSFORMATIVE CHANGE

### Pastoral agriculture in New Zealand will struggle to increase output significantly over the next decade

Potential for transformative change in pasture-based land output (model)

Objective	Key Driver	Potential for transformative change	Key Issues
More grazing land	More high country	None	<ul style="list-style-type: none"> <li>- Very marginal land created by historic subsidies</li> <li>- Increasing environmental concerns</li> </ul>
	More grassland	Low	<ul style="list-style-type: none"> <li>- Competition with forestry</li> <li>- Increase in lifestyle blocks (+37,600ha/year)</li> </ul>
Increase efficiency of land	More irrigation	Medium	<ul style="list-style-type: none"> <li>- Public opposition to new schemes</li> <li>- Cost of systems/new schemes</li> <li>- Market pricing of water</li> </ul>
	Better fertiliser utilisation	Low	<ul style="list-style-type: none"> <li>- Groundwater pollution</li> <li>- Cost</li> </ul>
	Better pasture	Low	<ul style="list-style-type: none"> <li>- Consumer opposition to genetic modification</li> </ul>
	Improved farm management	Medium	<ul style="list-style-type: none"> <li>- Dispersed and fragmented population</li> <li>- Traditional attitudes</li> <li>- Gap between leaders and average</li> </ul>
Increased efficiency of animals	Better animal genetics	Medium	<ul style="list-style-type: none"> <li>- Consumer opposition to genetic modification</li> </ul>
	New or different species	Low	<ul style="list-style-type: none"> <li>- Failure of numerous past attempts (e.g. goats)</li> <li>- Increased biosecurity regulation limiting new species introduction<sup>1</sup></li> </ul>

## RECOMMENDATIONS

Based on our research, we make the following recommendations to the taskforce

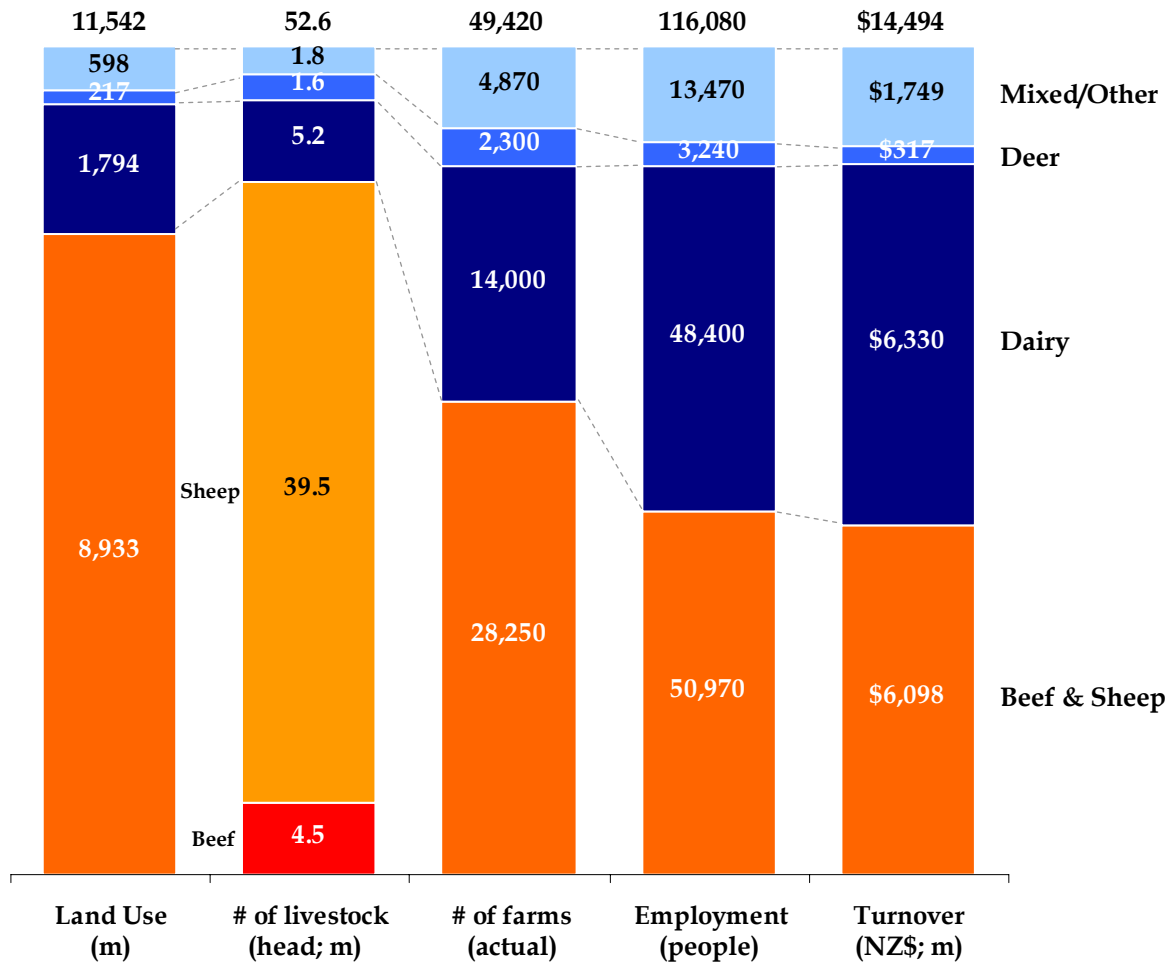
### Recommendations to Food and Beverage Taskforce to increase pasture-based land output

Objective	Issue	Recommendations
More grazing land	Massive growth of lifestyle blocks	<ol style="list-style-type: none"> <li>1. Control spread of lifestyle blocks through zoning rather than through minimum block size</li> <li>2. Research actual lifestyle land required per household (i.e. are we forcing them to take 20ha when they really want 2ha)</li> <li>3. Encourage systems to optimise production on lifestyle blocks (e.g. leasing by commercial farmers)</li> </ol>
	Decreasing amount of land being farmed	<ol style="list-style-type: none"> <li>1. Review effect of environmental legislation on land use</li> </ol>
Increase efficiency of land	More irrigation	<ol style="list-style-type: none"> <li>1. Measure amount of water used by irrigation</li> <li>2. Expand area served by irrigation schemes</li> <li>3. Introduce market pricing to water to encourage efficient use of water resources</li> <li>4. Encourage conversion of border dike irrigation to centre pivot irrigation</li> </ol>
	Better fertiliser utilisation	<ol style="list-style-type: none"> <li>1. Fund research into efficiency of fertiliser utilisation</li> </ol>
	Better pasture	<ol style="list-style-type: none"> <li>1. Continue to fund pasture research</li> <li>2. Ensure free access to overseas species/germ plasm</li> </ol>
	Improved farm management	<ol style="list-style-type: none"> <li>1. Ensure we have the best initial farm management training program</li> <li>2. Explore farm extension program to disseminate best practice</li> </ol>
Increased efficiency of animals	Better animal genetics	<ol style="list-style-type: none"> <li>1. Understand regulatory barriers to introduction of new genetic material</li> <li>2. Continue to fund agricultural research</li> </ol>
	New or different species	<ol style="list-style-type: none"> <li>1. Government program to evaluate potential new livestock species</li> <li>2. Review Hazardous Substances and New Organisms Act to enable free and open access to non-indigenous species required for continued innovation</li> <li>3. Explore role of government in infant industry support</li> </ol>

# OVERVIEW - LIVESTOCK FARMING

## Beef, sheep and dairy farming dominate New Zealand livestock farming

Livestock farming overview by farm type (various)



### Discussion Points

- Relative efficiency by sector

### Notes

- Definitions and details available on relevant pages
- Sheep and beef data combined in most cases due to statistical softness between different definitions (i.e. primarily sheep, sheep-beef, beef)

## DIRECTIONAL TREND - LIVESTOCK FARMING

Over the medium-to-long term, some sectors of livestock farming are struggling, while others are experiencing good growth

Directional trends in livestock farming  
(growth or decline)

	# of livestock		Land Use	# of Farms		Employment	Turnover
	(85-02)	(95-02)	(85-02)	(85-02)	(95-02)	(85-98)	(98-03)
Beef	▼	▼	▲	▲	▲	▲	▲
Sheep	▼	▼	▼	▼	▲	▼	▲
Sheep/ Beef	-	-	▼	▼	▼	▲	▲
Dairy	▲	▲	▲	▼	▼	▲	▲
Deer	▲	▲	▲	▲	▲	▲	▲
Pigs	▼	▼	▲	▼	▼	▲	▲
Poultry	▲	▲	▲	▼	▼	▲	▲
Other	▼	▼	▼	▲	▲	▲	▲

### Discussion Points

- Long-term prognosis for sheep?
- Ultimate potential of deer?
- Consolidation in dairy

### Notes

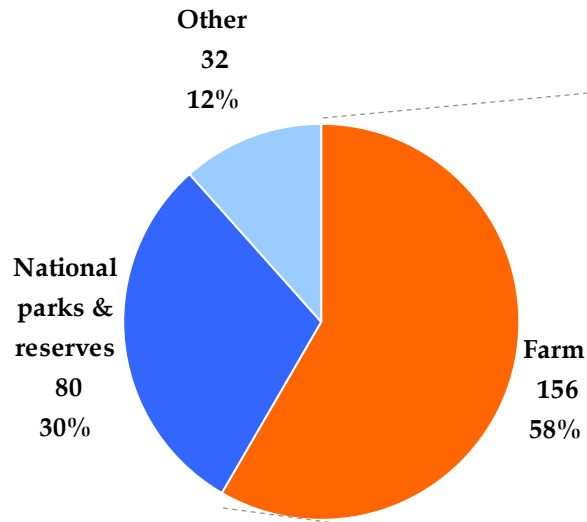
- Differing time periods (e.g. turnover 5 years vs. land use 17 years)
- Use with caution; should be treated as directional; different surveys; different methods; different definitions
- Details available on specific pages



# LAND USE

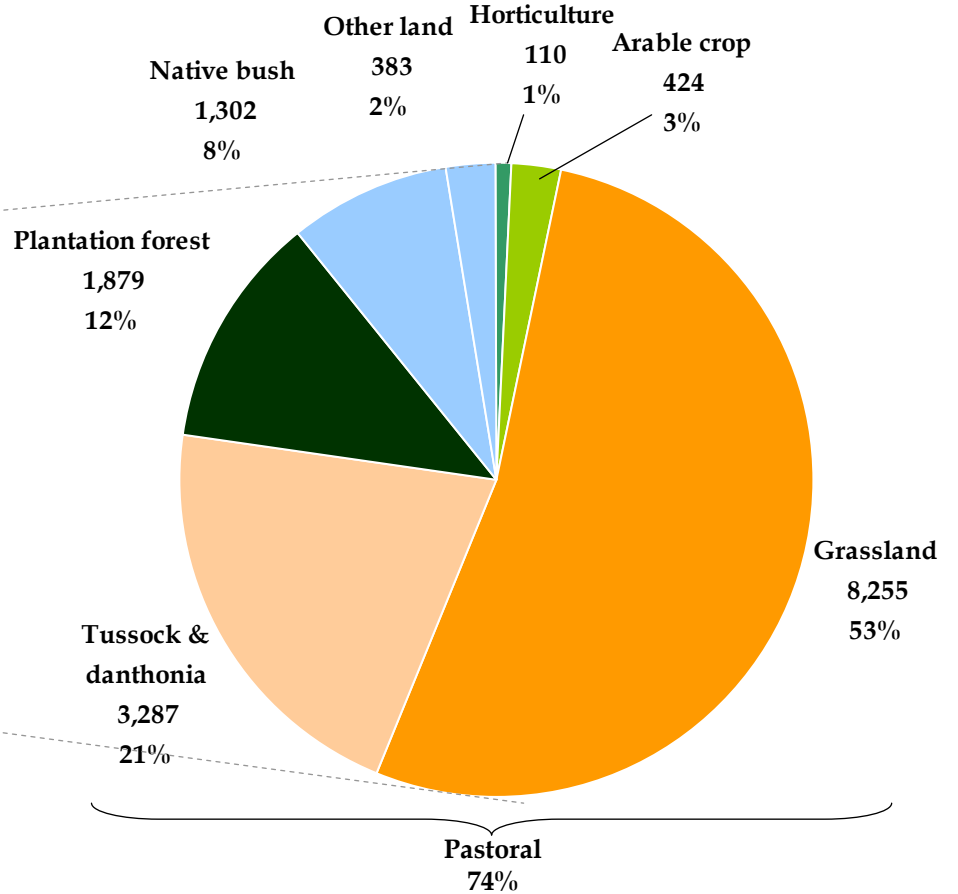
## Pastoral land accounts for 74% of total farm land in New Zealand

Total New Zealand land use (sqkm, thousands, 2002)



Total = 268,000 sqkm

Total New Zealand farm land use (hectares, thousands, 2002)

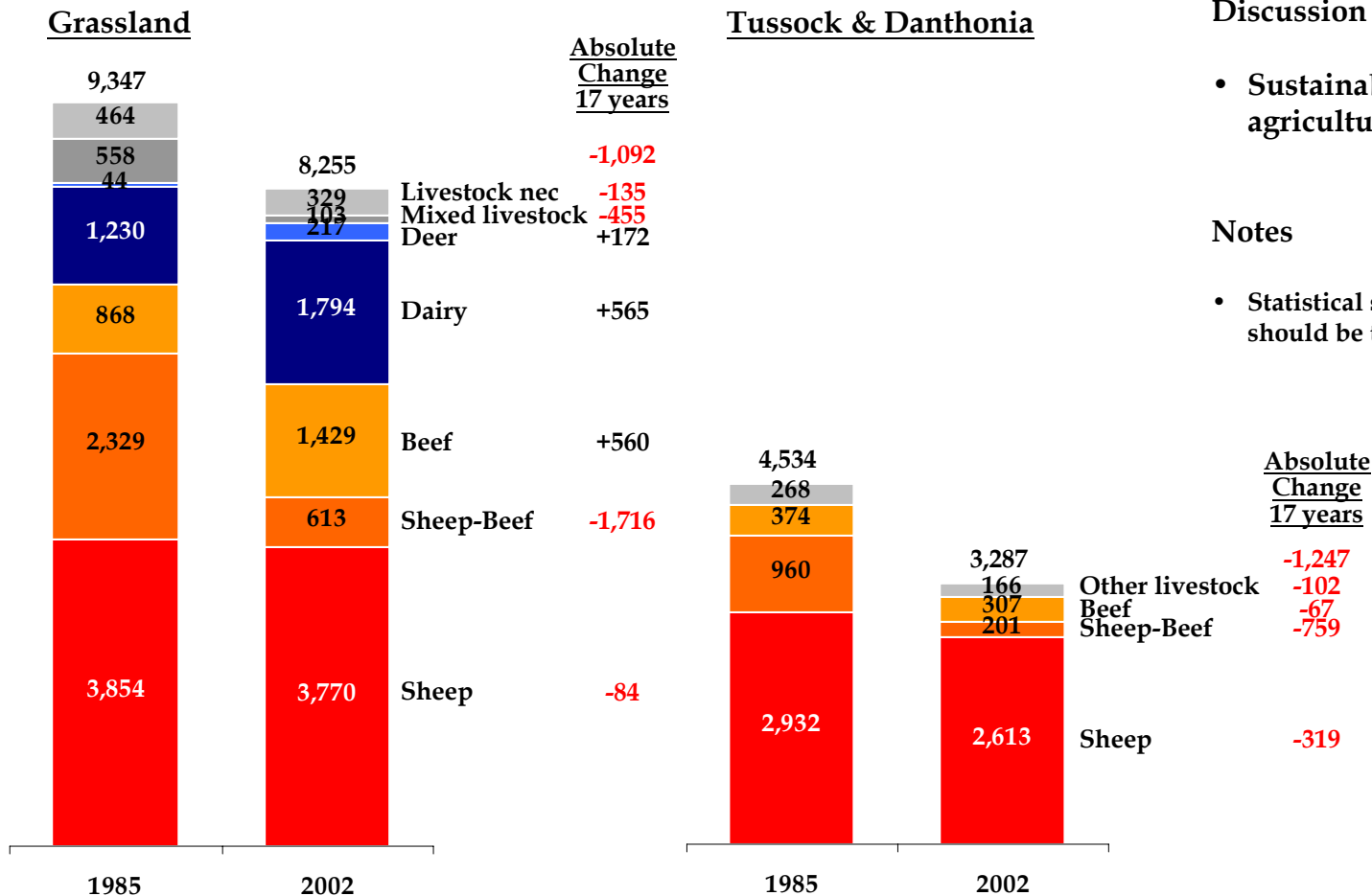


Total = 15,640,000 hectares

## CHANGE IN FARM LAND USE - PASTORAL

The total amount of pastoral land in use in New Zealand has shown significant decline in the past 20 years

Change in pastoral land use  
(hectares, thousands, 1985-2002)



### Discussion Points

- Sustainable long-run land use by agriculture

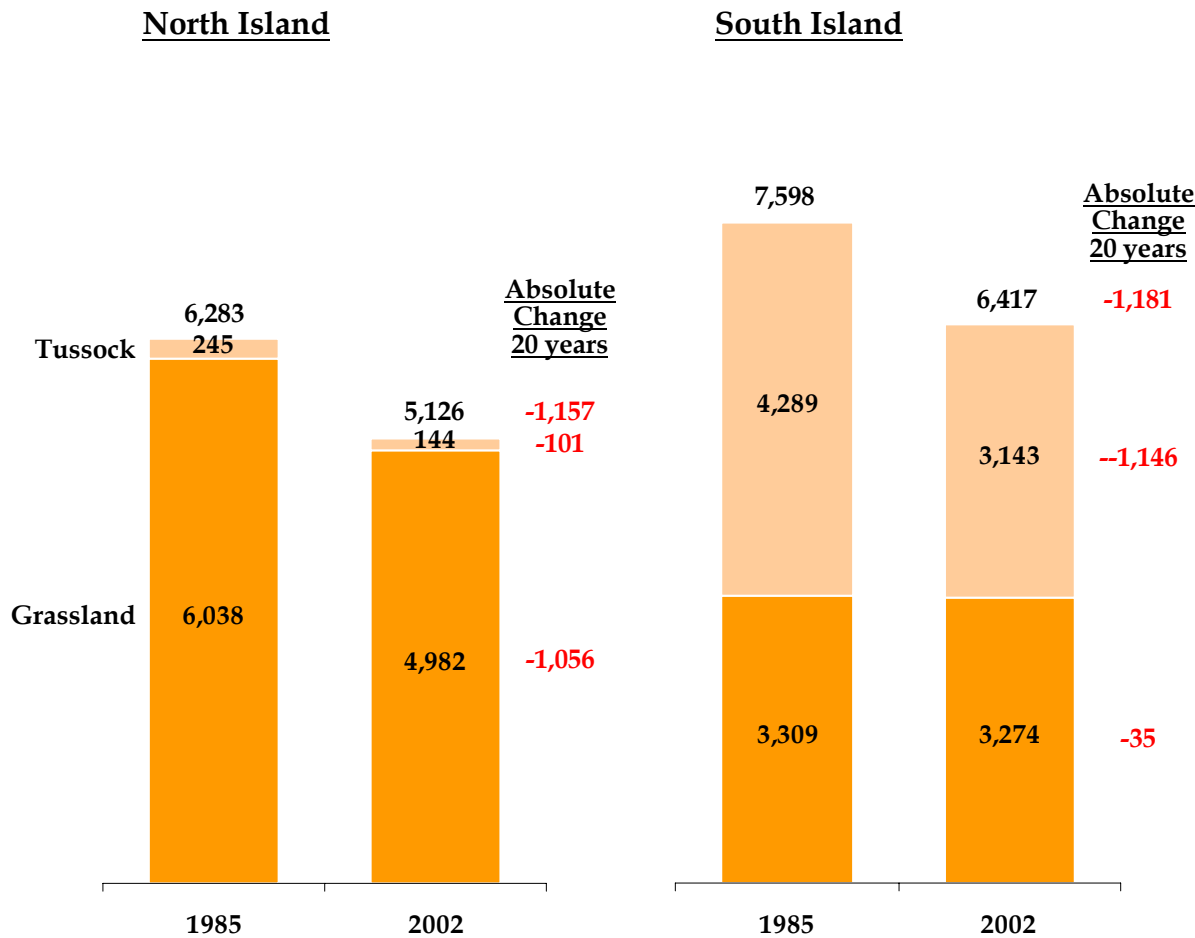
### Notes

- Statistical softness in Sheep-Beef / Beef split; should be thought of as one category

## CHANGE IN FARM LAND USE - BY ISLAND

This decline in pastoral land has been driven by less grassland in the North Island and less tussock in the South Island

Change in pastoral land use by type and location  
(hectares, thousands, 1985-2002)



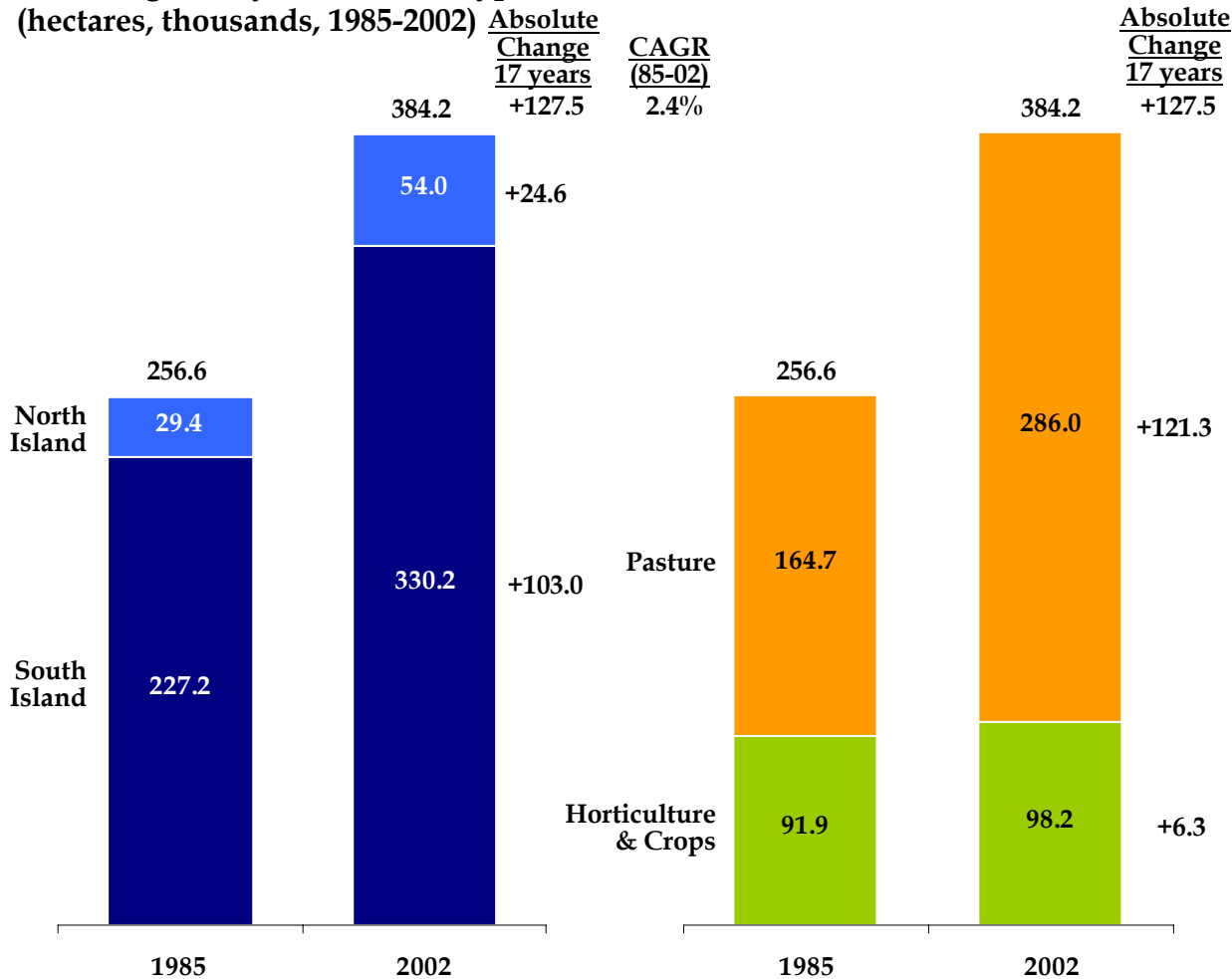
### Discussion Points

- What expectation of further declines in grazing on high country land in the South Island?
- What is driving the decline of North Island grassland? Forestry (+800) cannot account for all of the decline

# LAND IRRIGATED

The amount of land irrigated has increased, primarily pasture land for grazing and in the South Island

Land irrigated by location and type  
(hectares, thousands, 1985-2002)



### Discussion Points

- Ultimate long-run sustainable level of irrigation in the South Island
- Compatibility of high-capital irrigation with low-cost producer status

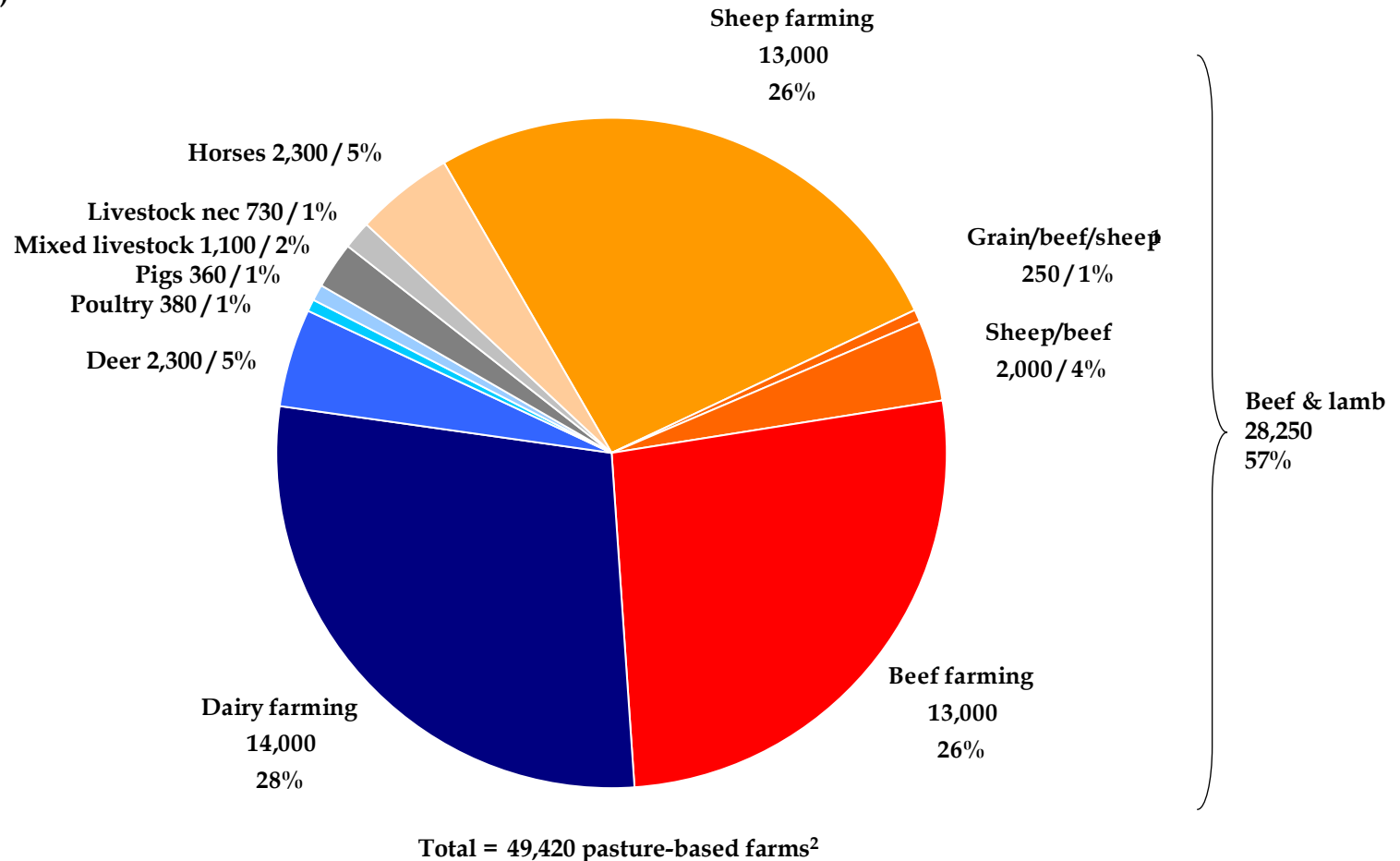
### Notes

- Land irrigated in year; land under irrigation system is larger (469,733ha)

## NUMBER OF LIVESTOCK FARMS BY TYPE

Of the 49,420 livestock farms, most are beef and lamb farms (57%) and dairy cattle farms (28%); all other livestock farms make up only 15% of the total

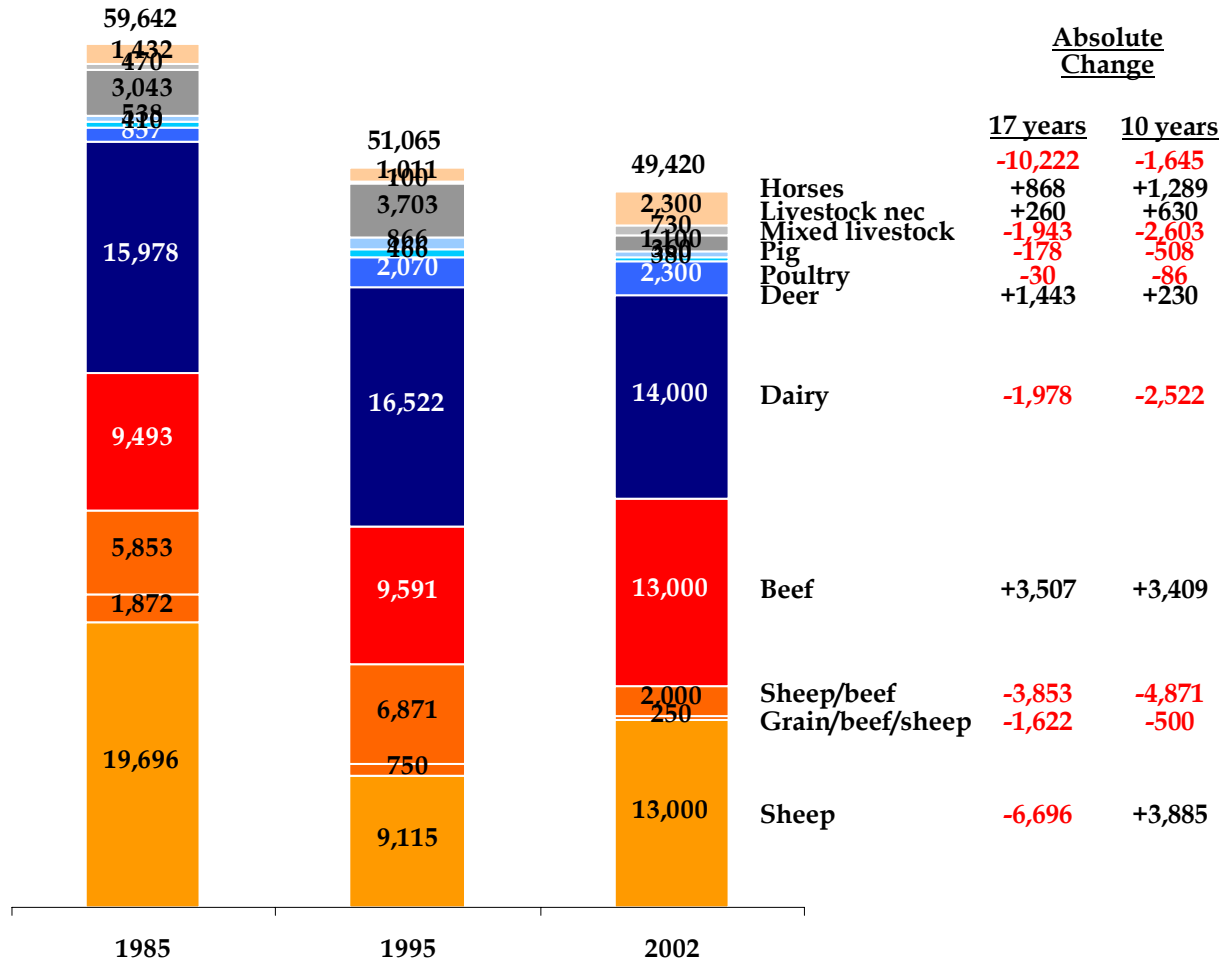
Number of pastoral farms by type  
(farms, actual, 2002)



# CHANGE IN NUMBER OF FARMS BY TYPE - LIVESTOCK

## The total number of livestock farms in New Zealand is falling

Number of livestock farms by type  
(farms, actual, 1985-2002)



### Discussion Points

- Relative impact of economies of scale by farm type

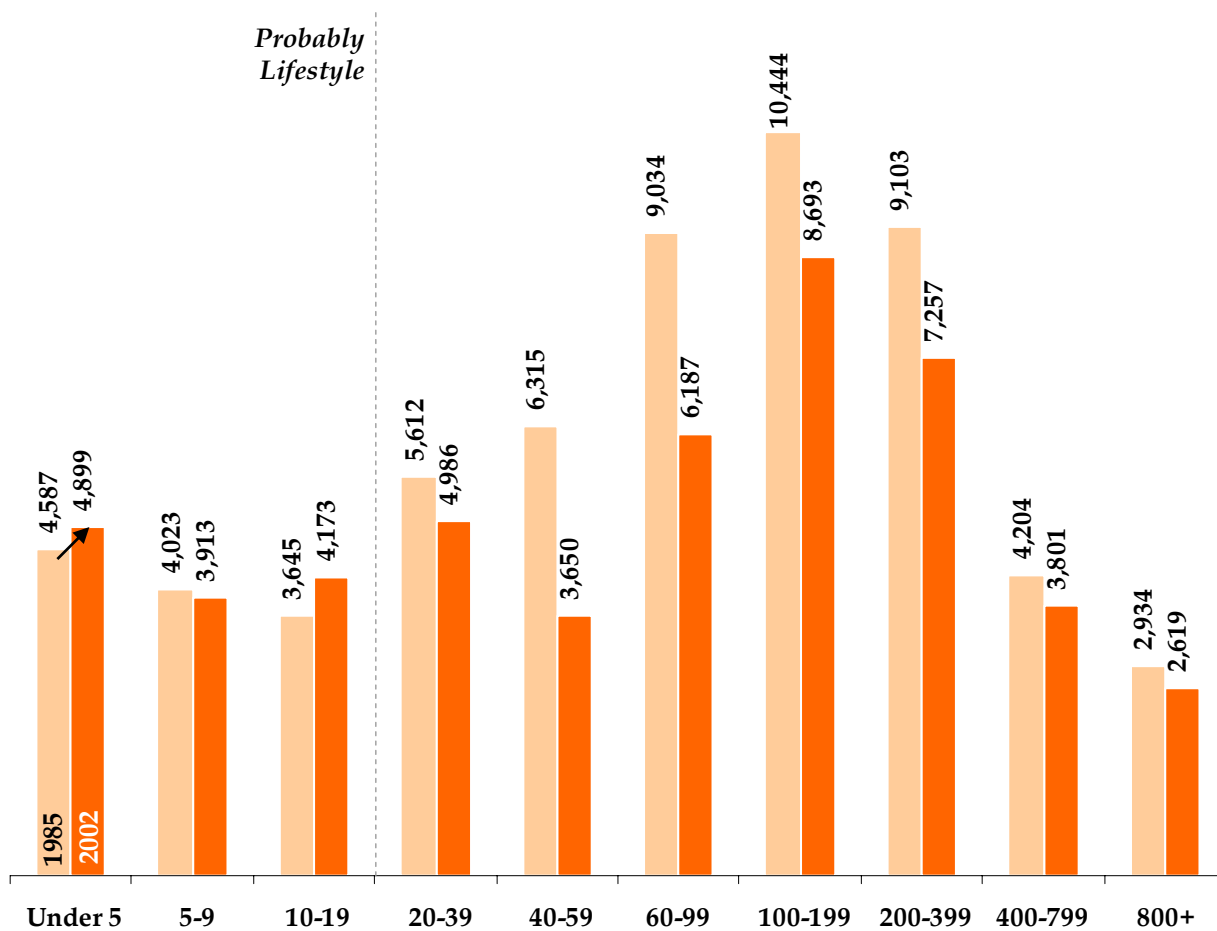
### Notes

- Statistical softness in Sheep-Beef / Beef split; should be thought of as one category

## NUMBER OF FARMS BY SIZE - LIVESTOCK

There has been an almost across-the-board decline in the number of livestock farms, except for the very small

Number of livestock farms by size group  
 (#of farms, by size of farm, hectares, 1985-2002)



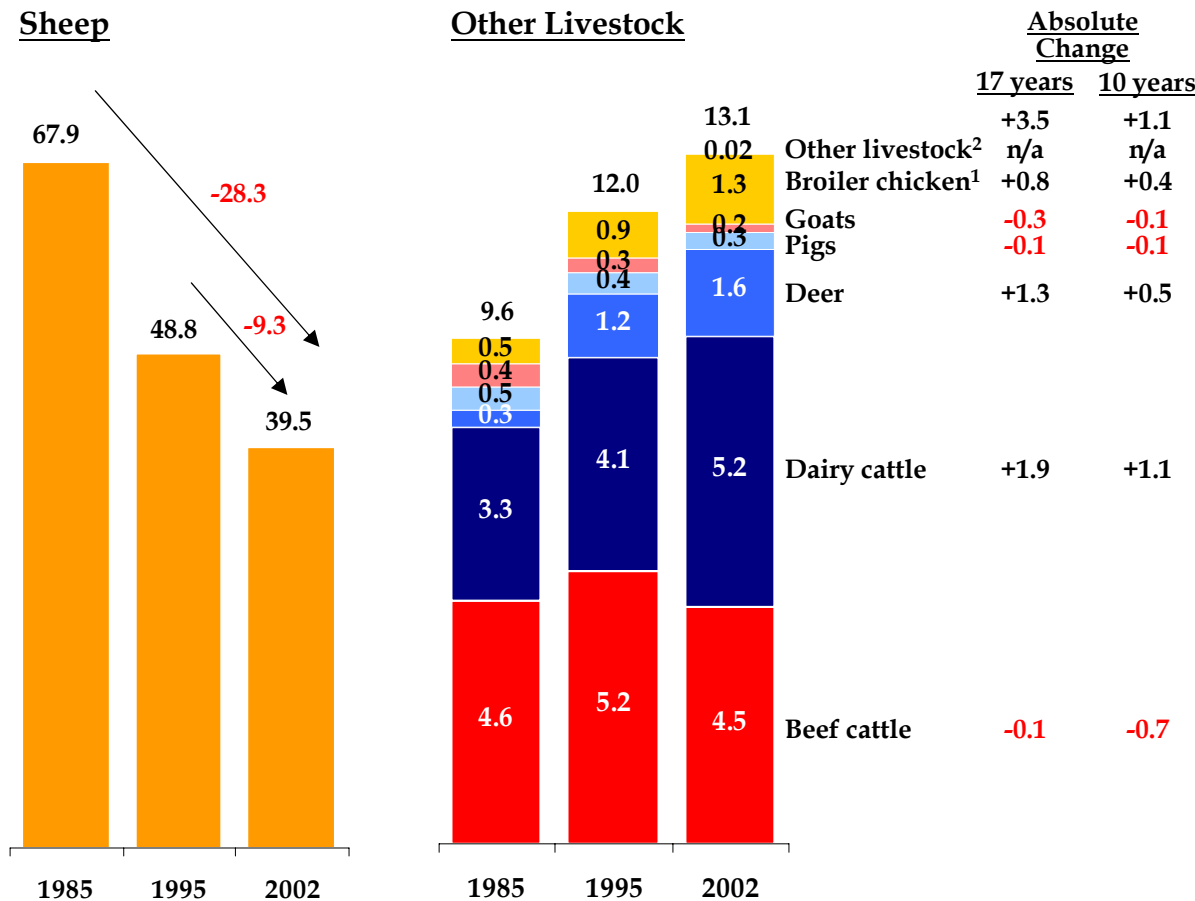
### Discussion Points

- Relative impact of economies of scale by farm type
- How much of this is the effect of the growth of lifestyle blocks? retirement of high country land?

# LIVESTOCK NUMBERS

While sheep number are down strongly and beef numbers are flat to down, dairy cattle and deer numbers are up

Number of livestock by type  
(animals, millions, 1985-2002)



## Discussion Points

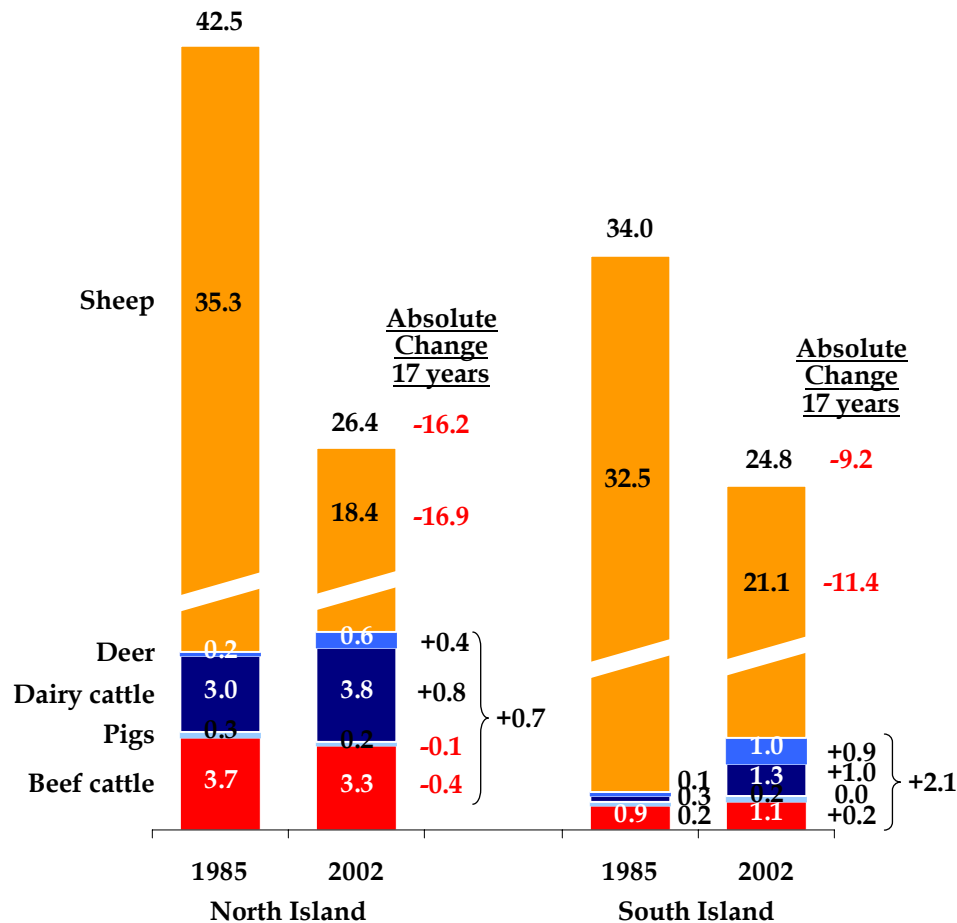
- Sheep-to-dairy conversions
- Sheep-to-forestry conversions
- Decline in beef cattle numbers



# LIVESTOCK NUMBERS BY ISLAND

While sheep numbers have fallen more in the North Island, other livestock are growing faster in the South Island

Number of livestock by type by island  
(animals, millions, 1985-2002)



## Discussion Points

- Sheep-to-dairy conversions in the South Island
- Sheep-to-forestry conversions in the North Island

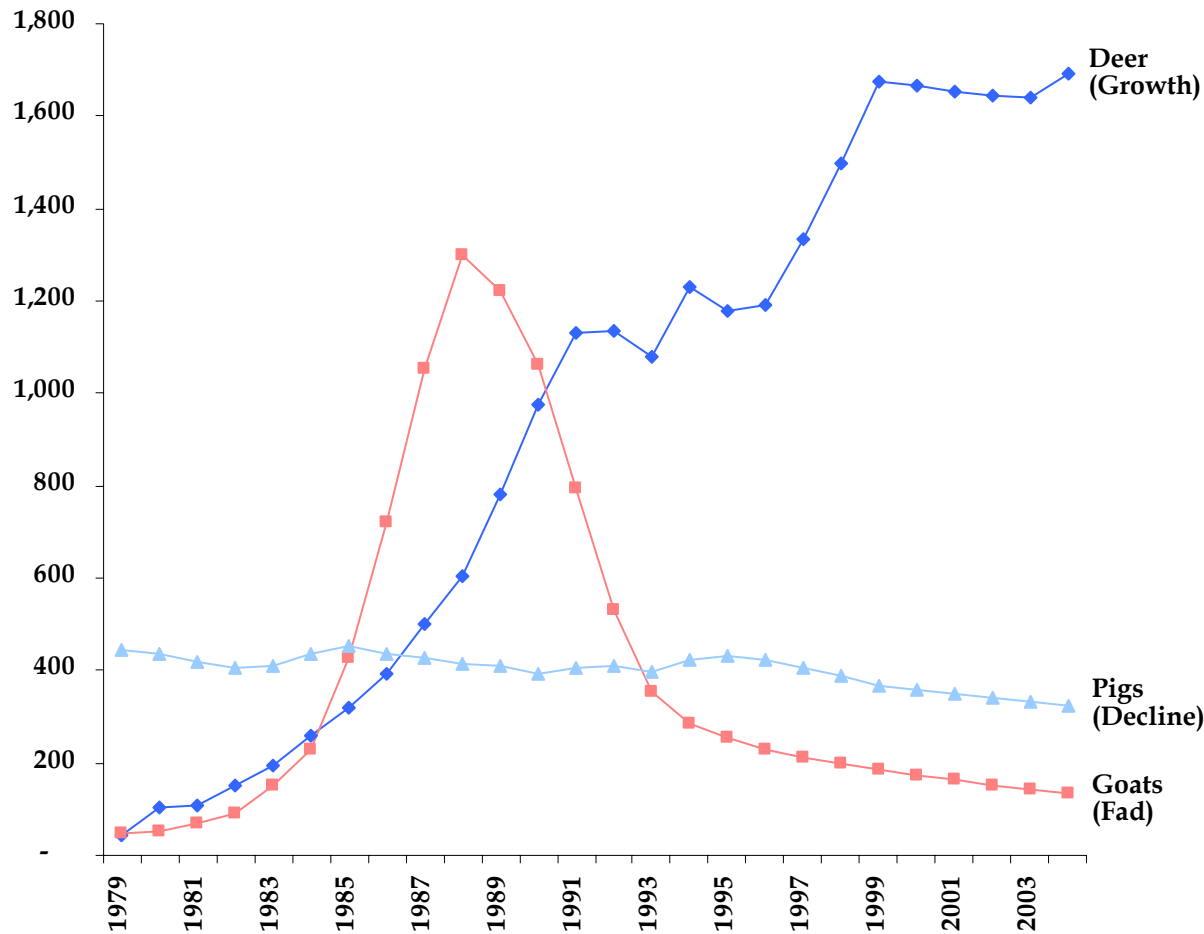
## Notes

- Excludes goats and other livestock
- Livestock inventory at a given point-in-time, not total in year (e.g. 22 week hog lifecycle)

# THREE MODELS FOR NEW LIVESTOCK - DEER, PIGS & GOATS

Examples of three different models of livestock species development can be found

Number of livestock by type  
(animals, thousands, 1979-2004)



### Discussion Points

- Role of government in new species development
- Ultimate potential of deer?
- Potential for new species:
  - Water buffalo
  - Milking sheep
  - Ostrich/Emu
  - Llama/Alpaca
  - Yak/Bison
  - Other?
- New Zealand is good at sheep; New Zealand is good at dairy; what else is required for success at milking sheep?

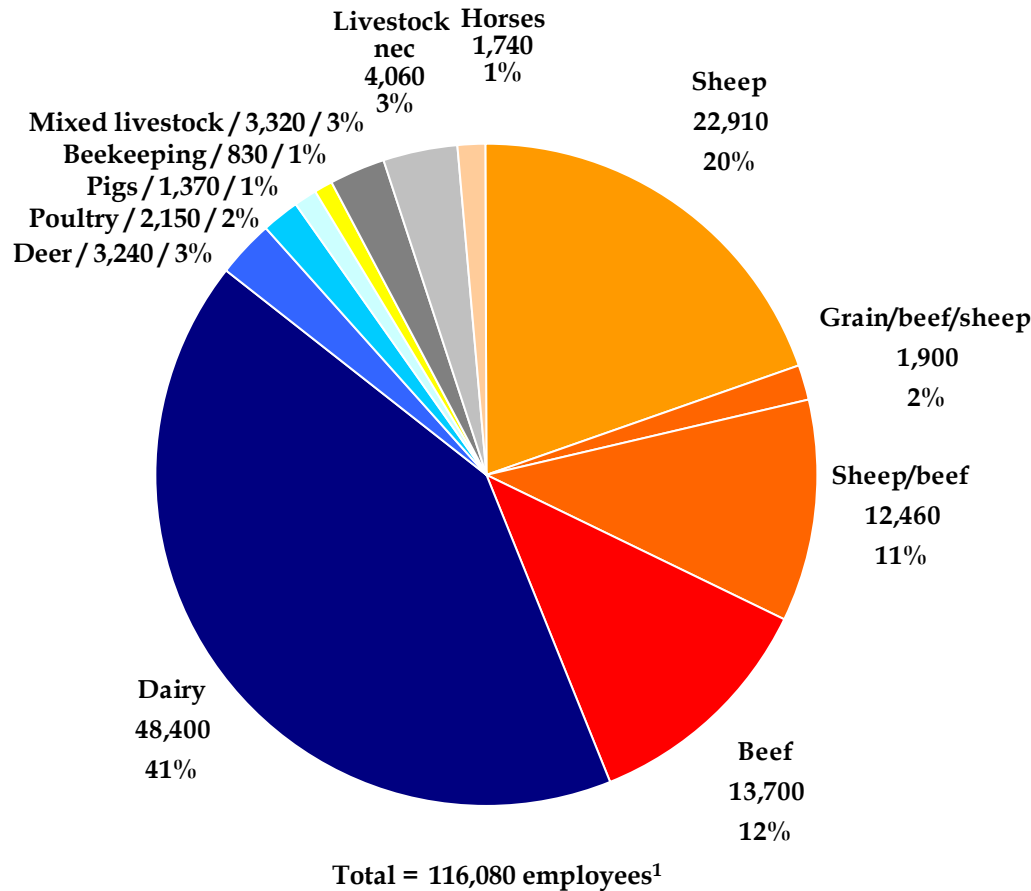
### Notes

- Goats number is correct
- Data is a point-in-time inventory

# LIVESTOCK FARM EMPLOYMENT

## Sheep, beef and dairy farms account for 86% of livestock farm employment

Number of people employed on livestock farms by type  
(people, actual, 1998)



### Discussion Points

- Relative high level of employment on dairy farms

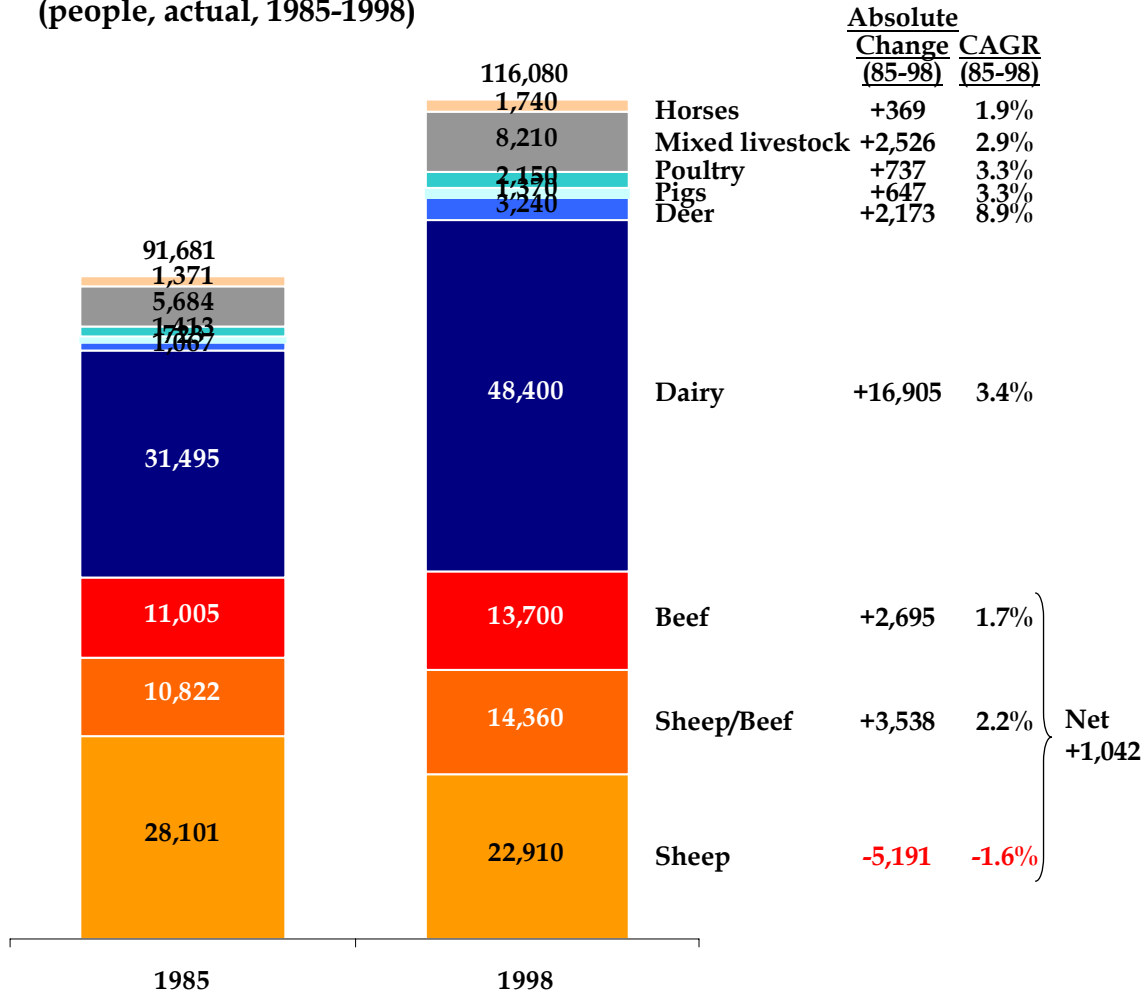
### Notes

- Total people not FTE
- Farm employment survey conducted only twice in last 18 years (1998, 2004)
- Uses 1998 data as this incorporated working proprietors (not measured in 2004 survey)
- May not capture total pool of seasonal labour
- No measure of unpaid working family members (35,000 across livestock & horticulture in 1985 survey)

# CHANGE IN LIVESTOCK FARM EMPLOYMENT

## Overall employment in livestock agriculture is up

Change in number of people employed on livestock farms by type (people, actual, 1985-1998)



### Discussion Points

- Vast bulk of employment growth coming from dairy farms

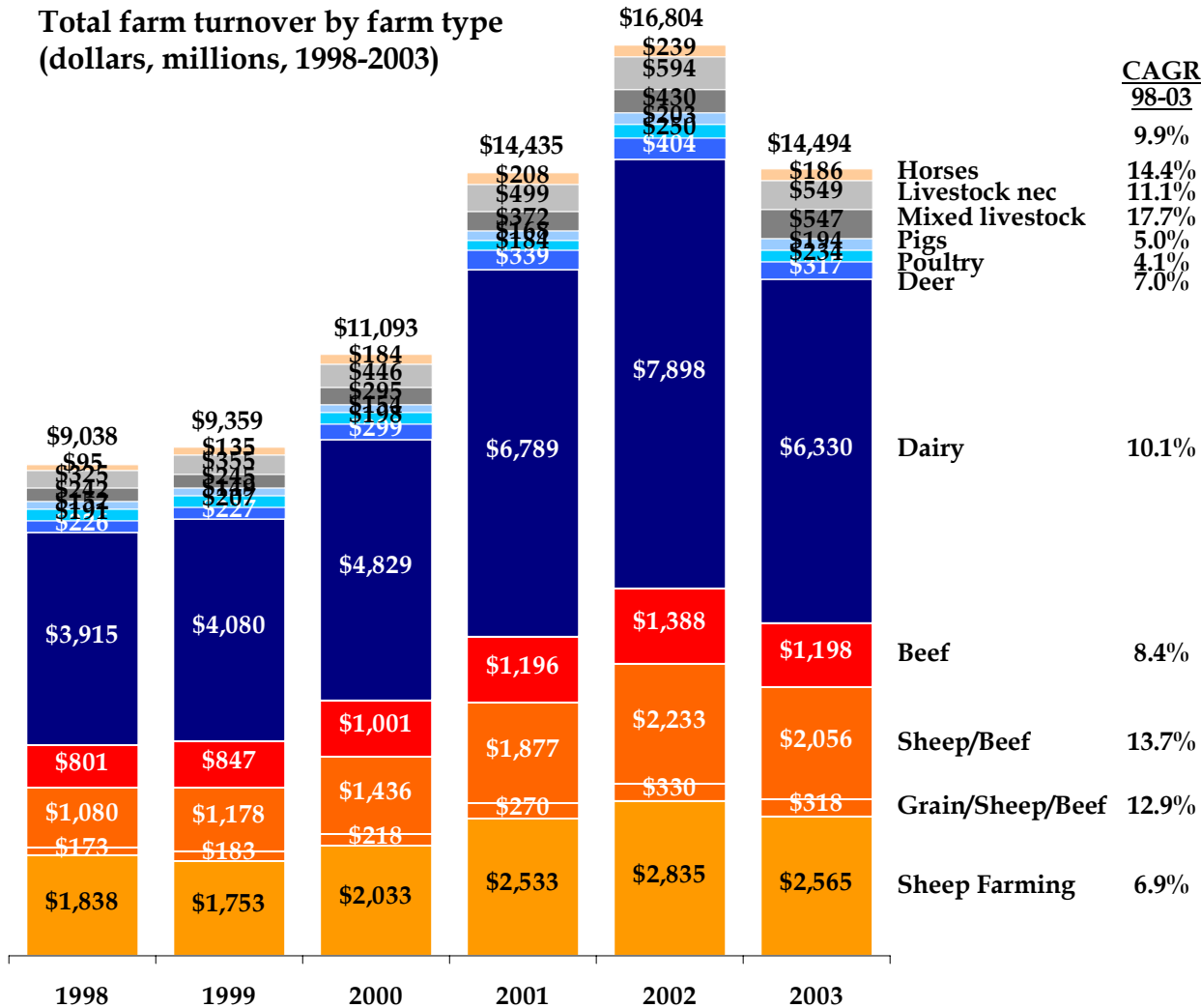
### Notes

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- May not capture total pool of seasonal labour
- No measure of unpaid working family members (35,000 across livestock & horticulture in 1985 survey)

# FARM TURNOVER GROWTH - LIVESTOCK

Livestock farm turnover showed strong growth in the last five years

Total farm turnover by farm type  
(dollars, millions, 1998-2003)



CAGR	98-03
9.9%	
14.4%	Horses
11.1%	Livestock nec
17.7%	Mixed livestock
5.0%	Pigs
4.1%	Poultry
7.0%	Deer

## Discussion Points

- Has the cycle turned? If so, are we heading for a hard landing or soft?
- How much is sustainable? How much is cyclical or currency? How much is one off events (e.g. BSE)?

## Notes

- AES 2004 data not yet available
- No comparable data available prior to 1998
- Methodology defines farm by primary income source
- Actual dollars; not inflation adjusted

# 1. PASTORAL BASED PRODUCTION - MEAT

Meat is the first main product of pasture land



## SWOT ANALYSIS - MEAT INDUSTRY

### The New Zealand meat industry is not currently configured for the future

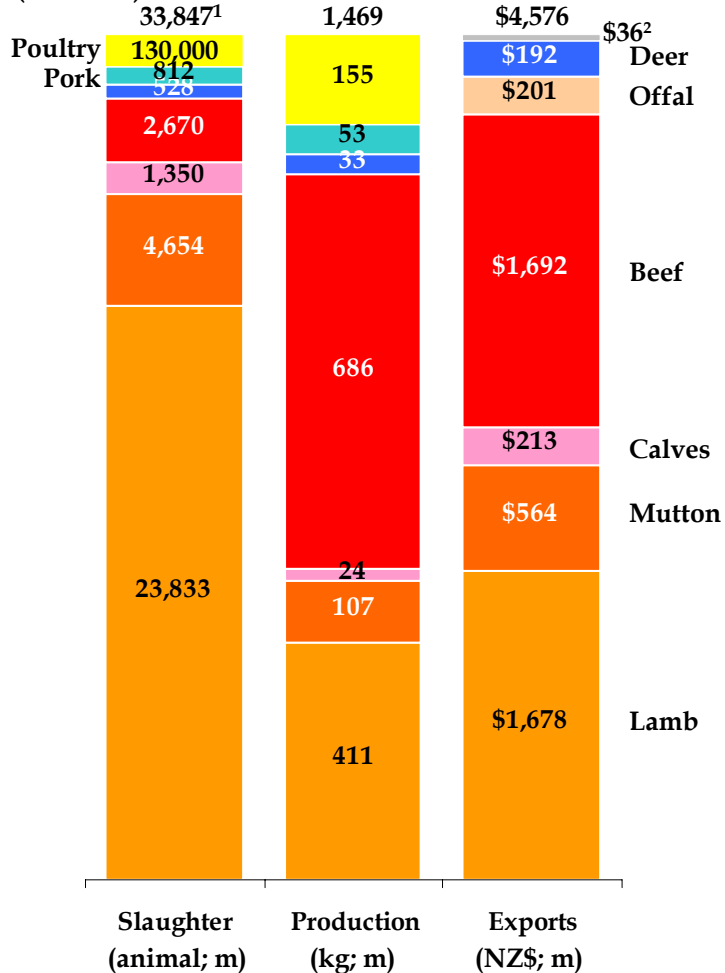
#### SWOT analysis of New Zealand in global meat

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>- Natural environment highly conducive to pastoral agriculture</li> <li>- Low cost, efficient production of grazing animals</li> <li>- Very low cost sheep and lamb inputs</li> <li>- Low cost energy inputs</li> <li>- Low cost dairy cull cows as an offshoot of a successful dairy industry</li> <li>- Low cost cattle inputs</li> <li>- Disease free status</li> <li>- Potential for year round production</li> </ul>	<ul style="list-style-type: none"> <li>- Significant dairy cow cull component not bred for meat quality</li> <li>- Significant sheep and lamb component with declining global consumption</li> <li>- Self-destructive behaviour and commodity mindset of some industry participants bringing down value of what should be a high end premium product</li> <li>- Not a low cost grain producer; cattle not grain fed as preferred by premium customers in major markets</li> <li>- No competency at vertically integrated intensive farming systems</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>- Continued income and consumption growth in Asia</li> <li>- Ongoing global growth of foodservice</li> <li>- Move to healthier/leaner meats</li> <li>- Integration with Australia</li> </ul>	<ul style="list-style-type: none"> <li>- Consolidation of global meat processors</li> <li>- Increasing lamb production in China</li> <li>- Latin American producers improving quality and systems</li> <li>- Intensively farmed meats (poultry and pig) with falling real costs per kg</li> <li>- Ongoing development of vertically-integrated intensive farming systems in beef</li> <li>- Death of customer base (older consumers in the UK eat lamb; younger consumers do not)</li> <li>- BSE and other health issues</li> </ul>

# OVERVIEW - MEAT PRODUCTION

While the New Zealand meat industry is primarily focused on beef and lamb, the importance of other species should not be underestimated

Meat processing overview by species (various)



Meat processing industry structure (various)

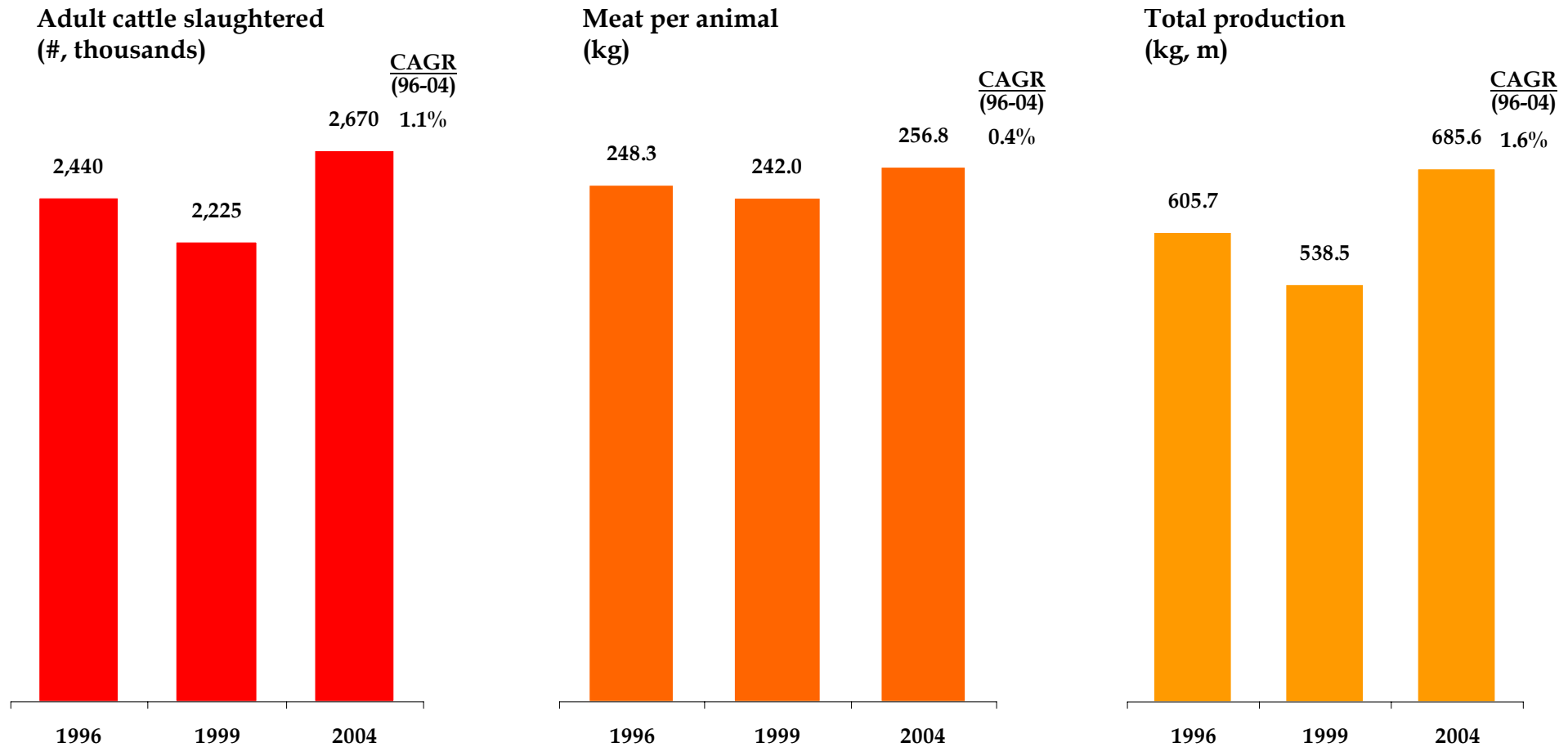




## BEEF - PRODUCTIVITY INDICATORS

The underlying productivity of New Zealand beef production - in terms of meat per animal - is not changing rapidly

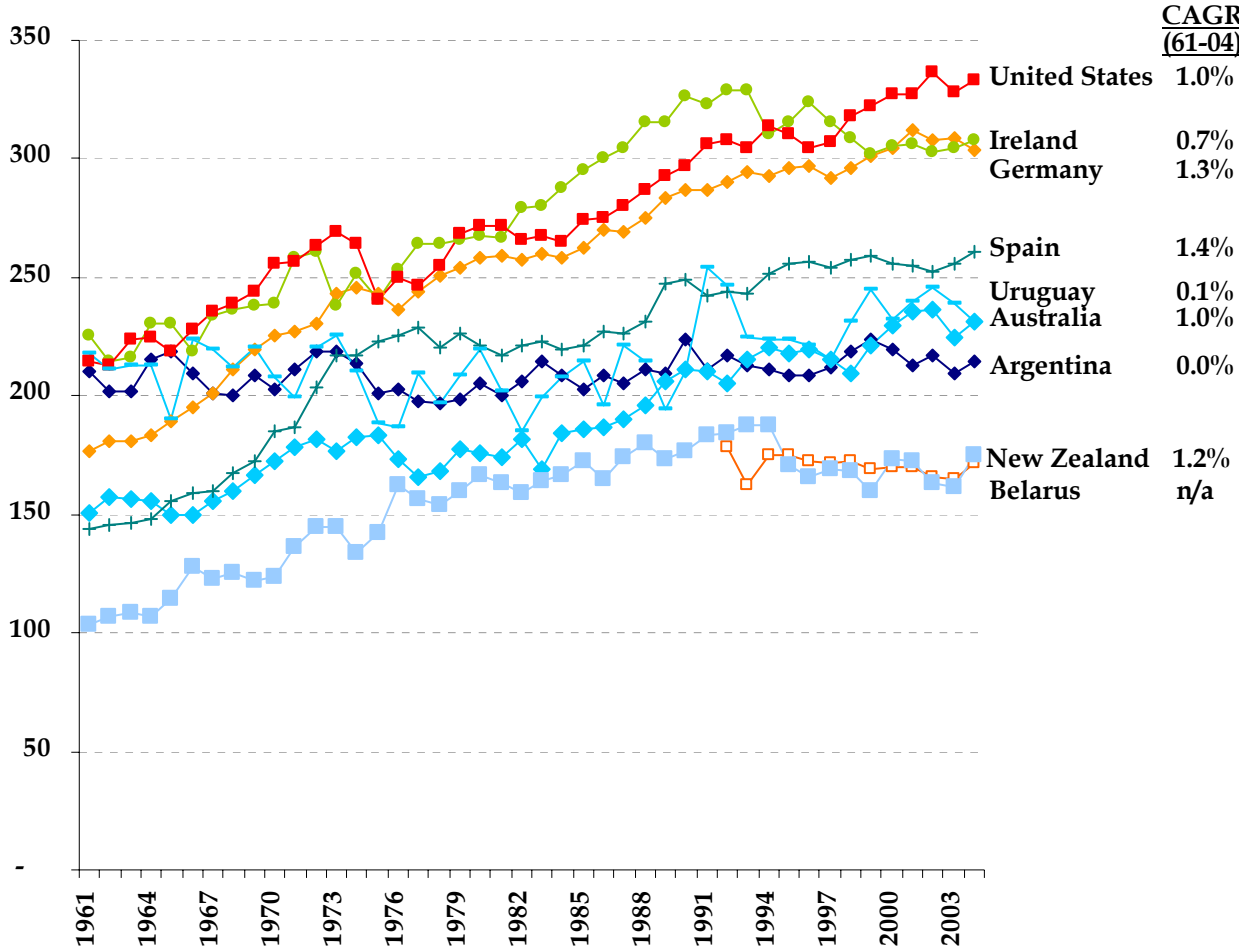
Key beef productivity indicators  
(1996-2004)



# LOW BEEF YIELDS PER ANIMAL VS. COMPETITORS

New Zealand gets very low beef yields per animal versus other major producers

Beef and veal meat production per animal (kilograms; 1961-2004)



## Discussion Points

- Why did yield growth plateau in the early 1990's?
- United States gets twice as much meat per animal; why? management, breeding or grain-feeding?
- Long term prognosis?
- At least we beat Belarus (who are a larger beef exporter than NZ)

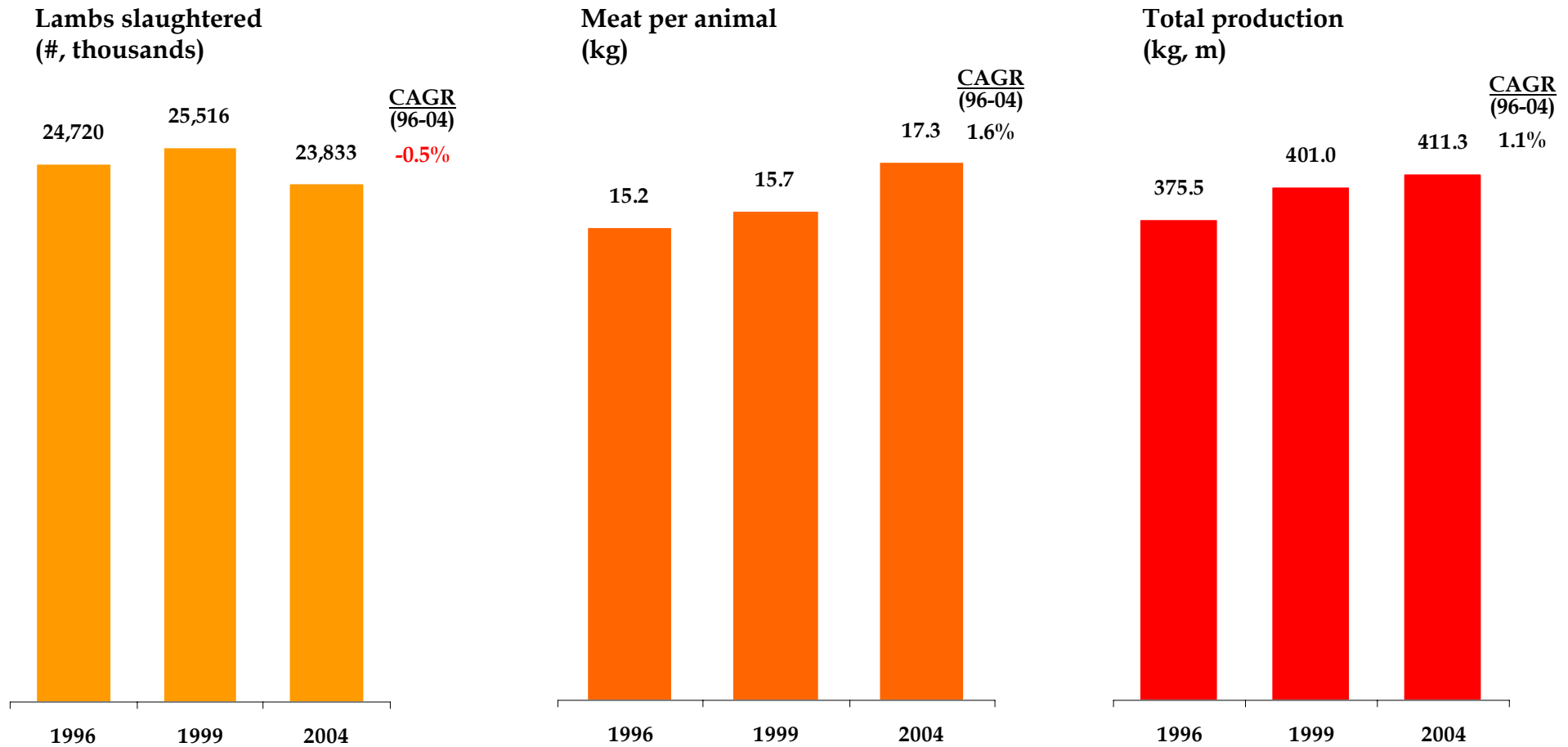
## Notes

- Includes beef and veal data at source; veal represents 3.4% of NZ beef & veal production

## LAMB - PRODUCTIVITY INDICATORS

While lamb numbers are in long-term decline, meat per animal is showing a reasonable increase, leading to increasing production

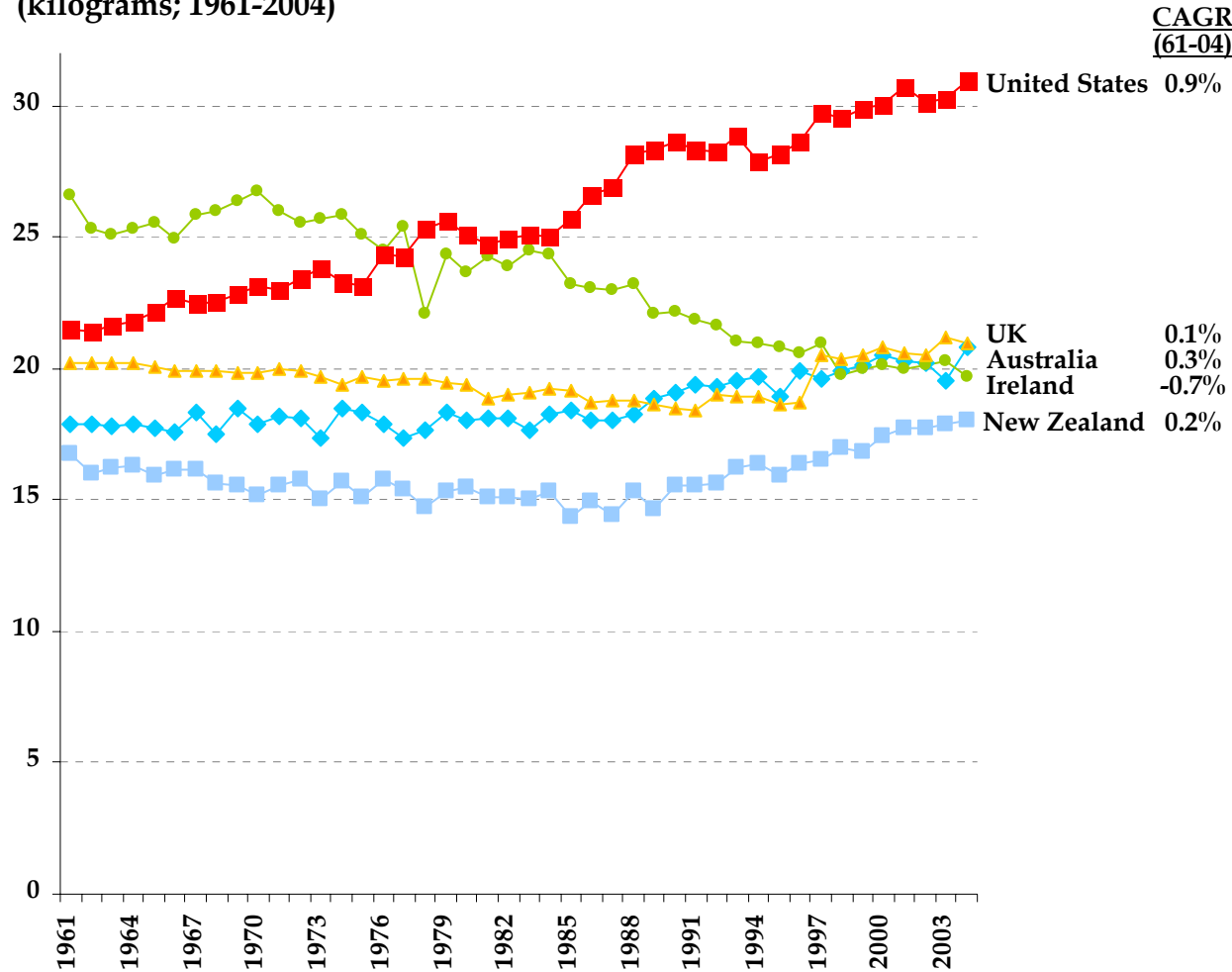
Key lamb productivity indicators  
(1996-2004)



# LOW MEAT PER ANIMAL YIELDS VS. COMPETITORS

New Zealand gets very low lamb meat yields per animal relative to other comparable lamb producers

Lamb and mutton meat production per animal (kilograms; 1961-2004)



### Discussion Points

- Why? Management, breeding or grain-feeding?
- Clearly this is only one factor in overall competitiveness; where do we excel?
- New Zealand CAGR was 1.0% in the recent period (1988-2004); can we continue this upward trend? 20kg/head by 2020? (i.e. where Australia is today)

### Notes

- Includes lamb and mutton

## INDUSTRY STRUCTURE - MEAT PROCESSING

**Meat processing is still primarily a New Zealand owned sector, but with growing international activity**

- **Built on low cost inputs of grass-fed livestock**
  - **New Zealand is a low cost producer of grass-fed lamb and beef as a result of its efficient livestock farmers**
  - **New Zealand is not a low cost producer of grain, hence is not a low cost producer of chicken, pork or other grain-based meats**
  - **Domestic poultry industry a product of phyto-sanitary regulations (i.e. no imports)**
  
- **Meat processing is comprised of three segments with no operational or ownership overlap**
  - **Meat processing (PPCS/Richmond, Alliance, Talleys/AFFCO, ANZCO)**
  - **Poultry processing (Heinz/Tegel, Inghams)**
  - **Bacon, ham and smallgoods processing (Huttons/Kiwi, others)**
  
- **Limited international ownership in the industry to date**
  - **International ownership of poultry (Inghams, Tegel/Heinz)**
  - **No trans-Tasman ownership or consolidation (other than Inghams)**
  - **Strong Japanese shareholding in ANZCO (75%); UK ownership of Bernard Matthews**
  - **No significant investment by New Zealand-based companies in international processing operations (other than AFFCO's failed China venture)**

## KEY COMPANIES - MEAT PROCESSING

### New Zealand has a strong base of locally owned meat processors

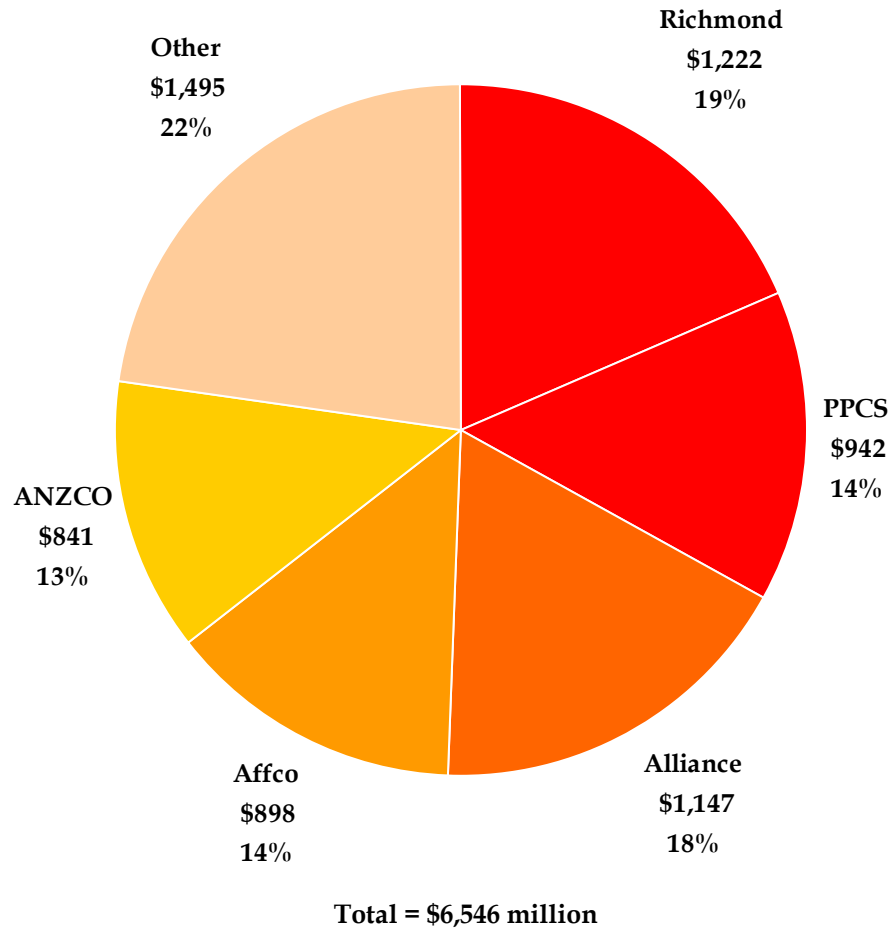
#### Key companies in the meat manufacturing and wholesaling sector

Company	Turnover (NZ\$; m; 2004)	Employees	Ownership	Activities
PPCS/Richmond	\$2,164 (\$942+\$1,222)	8,000 (4,000+4,000)	New Zealand Cooperative	- Beef, lamb and venison processing - Accounts for 37% sheep/35% beef/54% venison exports
Alliance Group	\$1,147	5,700	New Zealand Cooperative	- Beef and lamb processing
AFFCO Holdings	\$891	2,800	New Zealand Public Listed	- Beef and lamb processing - 40% owned by Talley's
ANZCO Foods	\$841	2,000	Japan/NZ Public/Private	- Beef and lamb processing - Owned by Itoham Japan (48.3%), Nippon Suisan (25.2%) & local management (26.5%)
Tegel Foods	\$427	2,250	United States Public Listed	- Poultry processing - Division of Heinz Watties; for sale
Bernard Matthews New Zealand	\$167	500	United Kingdom Public Listed	- Lamb and beef processing - Owned by Bernard Matthews UK
Huttons/Kiwi/Top Hat	\$127	?	Rank Group	- Bacon, ham and smallgoods - Division of Mainland Products (former subsidiary of Fonterra)
Inghams New Zealand	\$106	950	Australia Private	- Division of Ingham's Enterprises Pty.
Blue Sky Meats	\$96	375	New Zealand Public Unlisted	- Processes lamb, sheep, bobby calves and goats
Wilson Foods/Wilson Hellaby	?	150	New Zealand Private	- Produces smallgood; owns Auckland Meat Processors

# MARKET SHARE - MEAT PROCESSING

Four companies account for about 78% of total New Zealand meat processing turnover

New Zealand meat processing turnover market share  
(dollars, millions, % of sales, 2004)



### Discussion Points

- Who is driving product innovation?
- What is stopping trans-Tasman (or international) integration?

### Notes

- Market share represents New Zealand wholesale domestic sales and export sales (at border); does not include international sales or margins

## ACQUISITIONS - MEAT PROCESSING

There have been a number of significant deals in meat processing recently

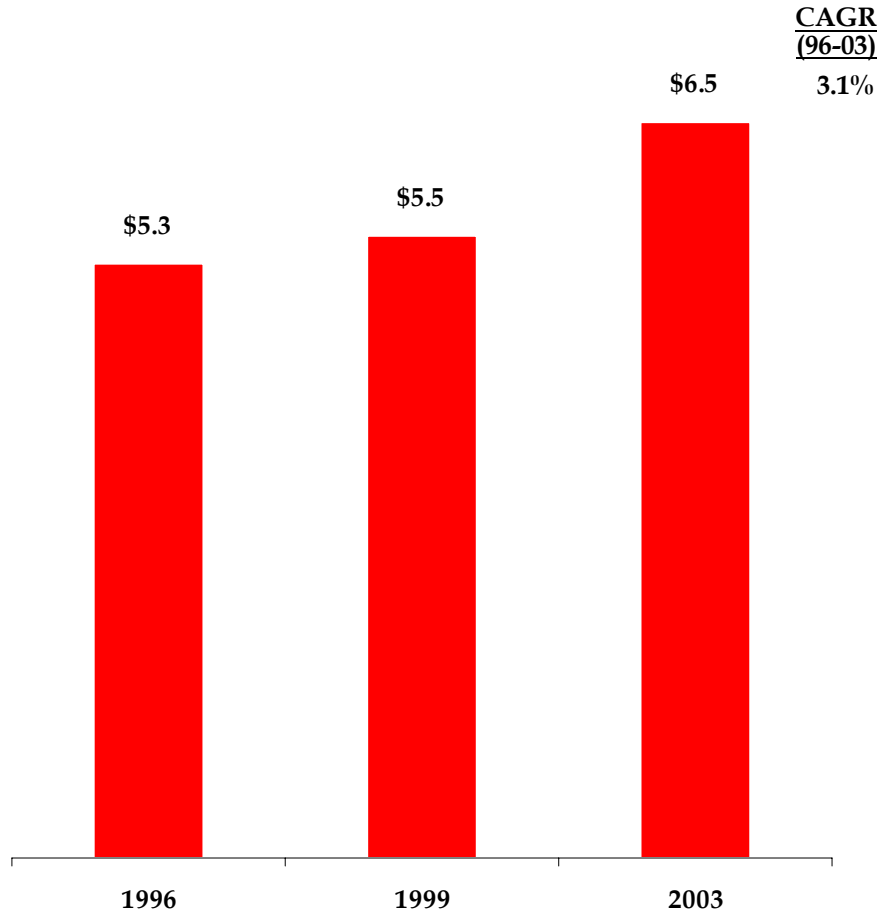
Acquiror	Acquiree	Date	Notes
Rank Group	Huttons/Kiwi/Top Hat	Aug 2005	Rank Group acquired Huttons/Kiwi as part of an asset swap with Fonterra
PPCS	Richmond	July 2004	Acquired 63% in April 2003; acquired remainder July 2004 Delisted from NZX
Talleys	AFFCO	2001-2003	Acquired 40% of AFFCO in stages
Rangatira Ltd	Heller Tasty	June 2003	Christchurch ham, bacon smallgoods company
Westmeat NZ Ltd	Bells Continental Smallgoods	Jan 2002	Name changed to: Luscutto Continental Smallgoods
Mainland Products	Food Solutions (Huttons/Kiwi/Top Hat)	Dec 1998	Brierley's sold Food Solutions (itself a merger of Top Hat bacon and Huttons Kiwi) to Mainland



# MEAT PROCESSING TURNOVER GROWTH

## Meat processing turnover is growing modestly

Meat processing turnover  
(dollars, millions, 1996-2003)



### Discussion Points

- Effect of exchange rates

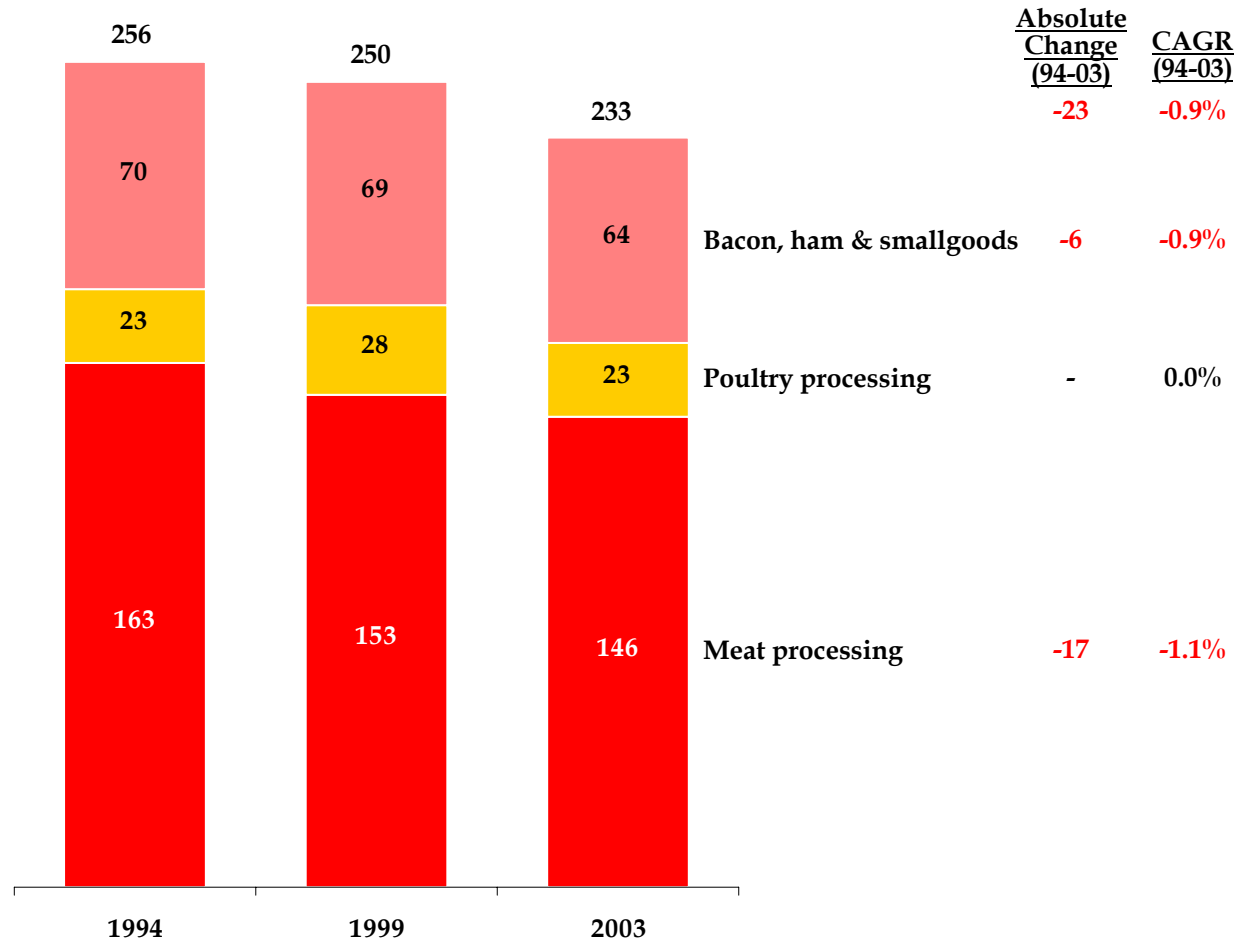
### Notes

- No data available prior to 1996 (AES); 2004 data not yet available

# MEAT MANUFACTURING ENTERPRISES

The number of meat manufacturing enterprises is declining

Meat manufacturing enterprises by sub-sector  
(enterprises, actual, 1994-2003)



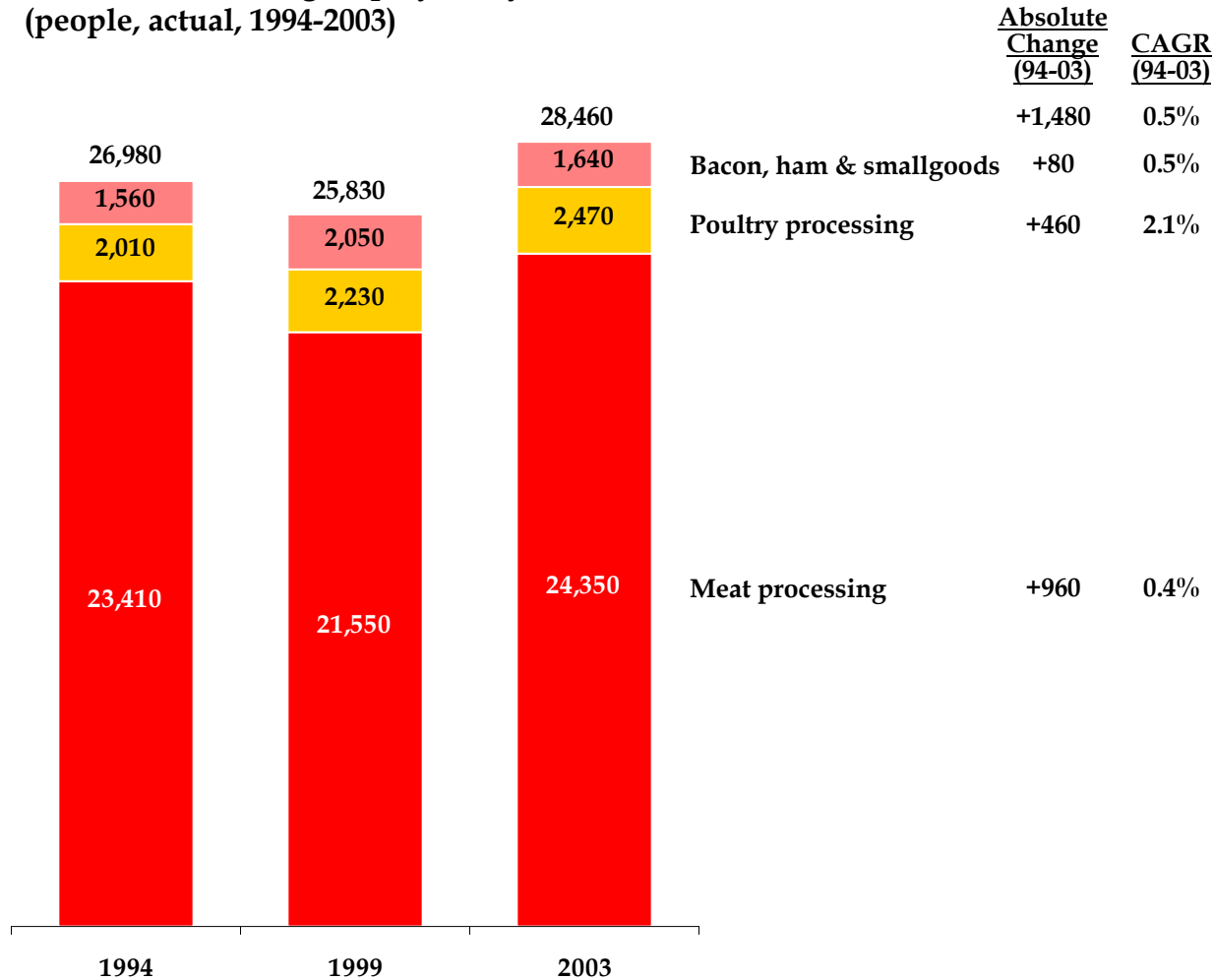
## Discussion Points

- Is consolidation taking place or are there fewer plants?

# MEAT MANUFACTURING EMPLOYMENT

## Employment in meat manufacturing is growing slightly

Meat manufacturing employees by sector  
(people, actual, 1994-2003)



### Discussion Points

- Fewer enterprises (prior page) but slightly more employees

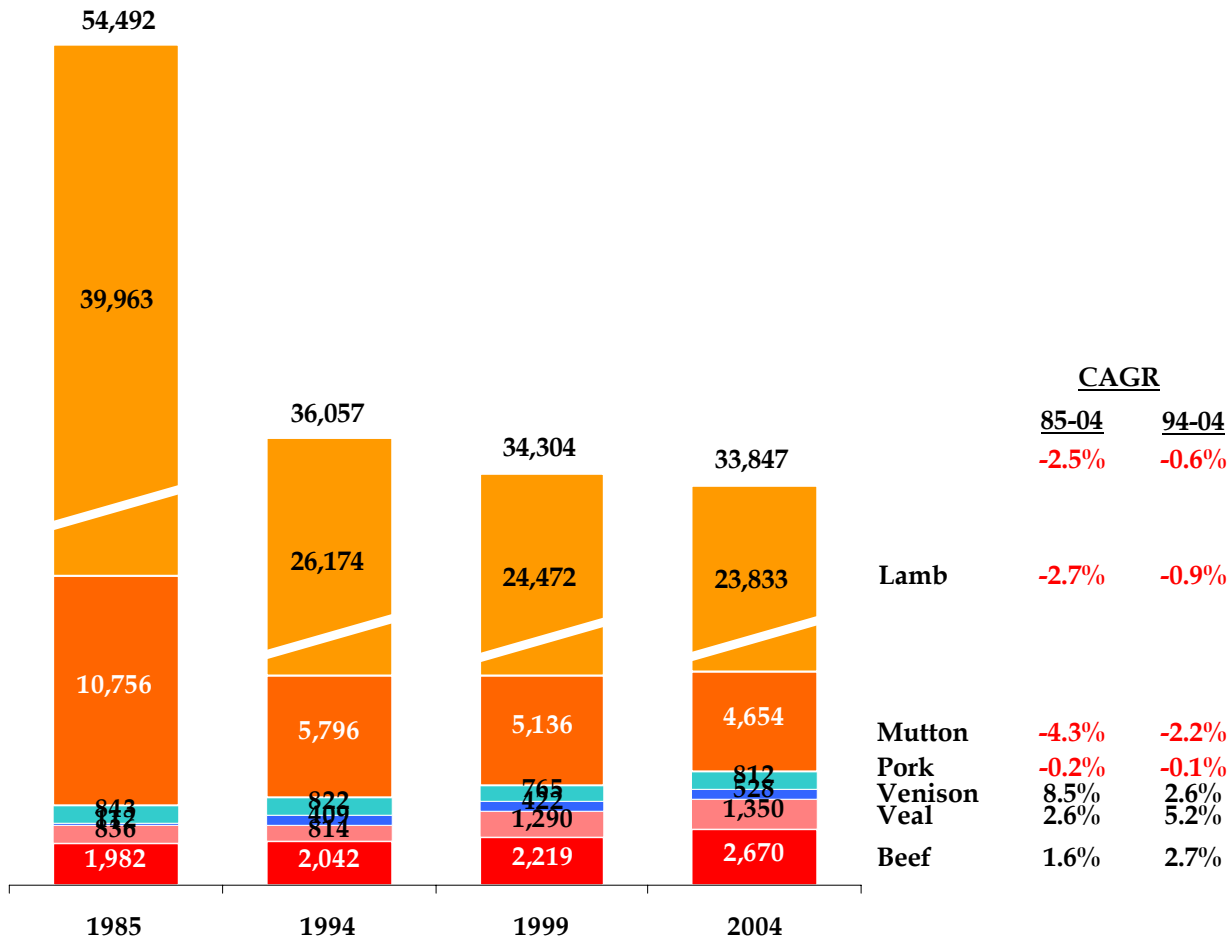
### Notes

- Includes working proprietors
- Total employees not FTE

# LIVESTOCK SLAUGHTER

The total number of animals slaughtered is down, driven by a decline in sheep and lamb; however beef, veal and venison are showing growth

Number of livestock slaughtered by species  
(animals, 000, 1985-2004)



## Discussion Points

- Long-run implications for employment
- Will lamb and sheep numbers continue to decline?

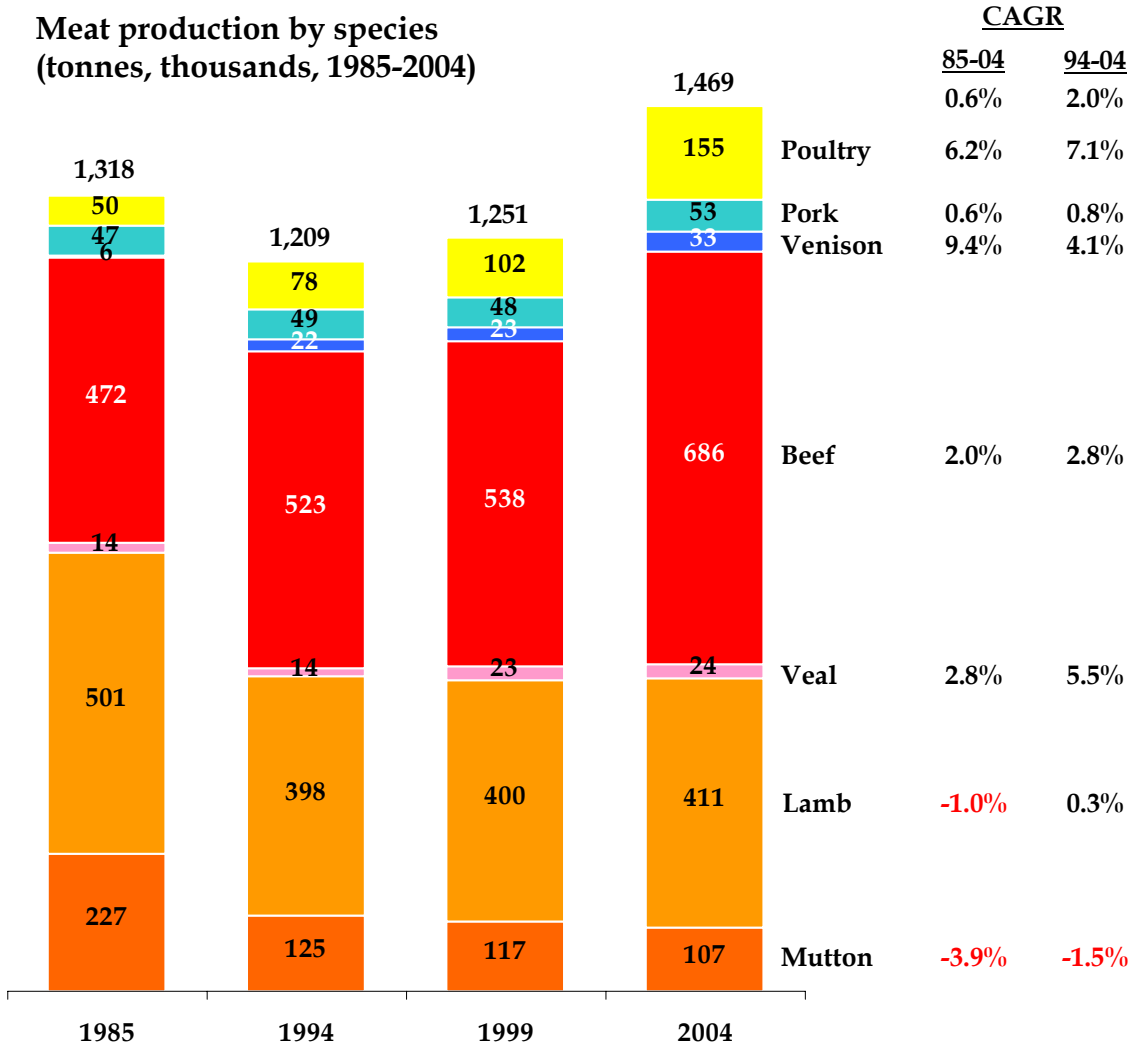
## Notes

- Excludes chicken numbers (130m) – we now have 5x chicken than sheep

# MEAT PRODUCTION

Total meat production is growing

Meat production by species  
(tonnes, thousands, 1985-2004)



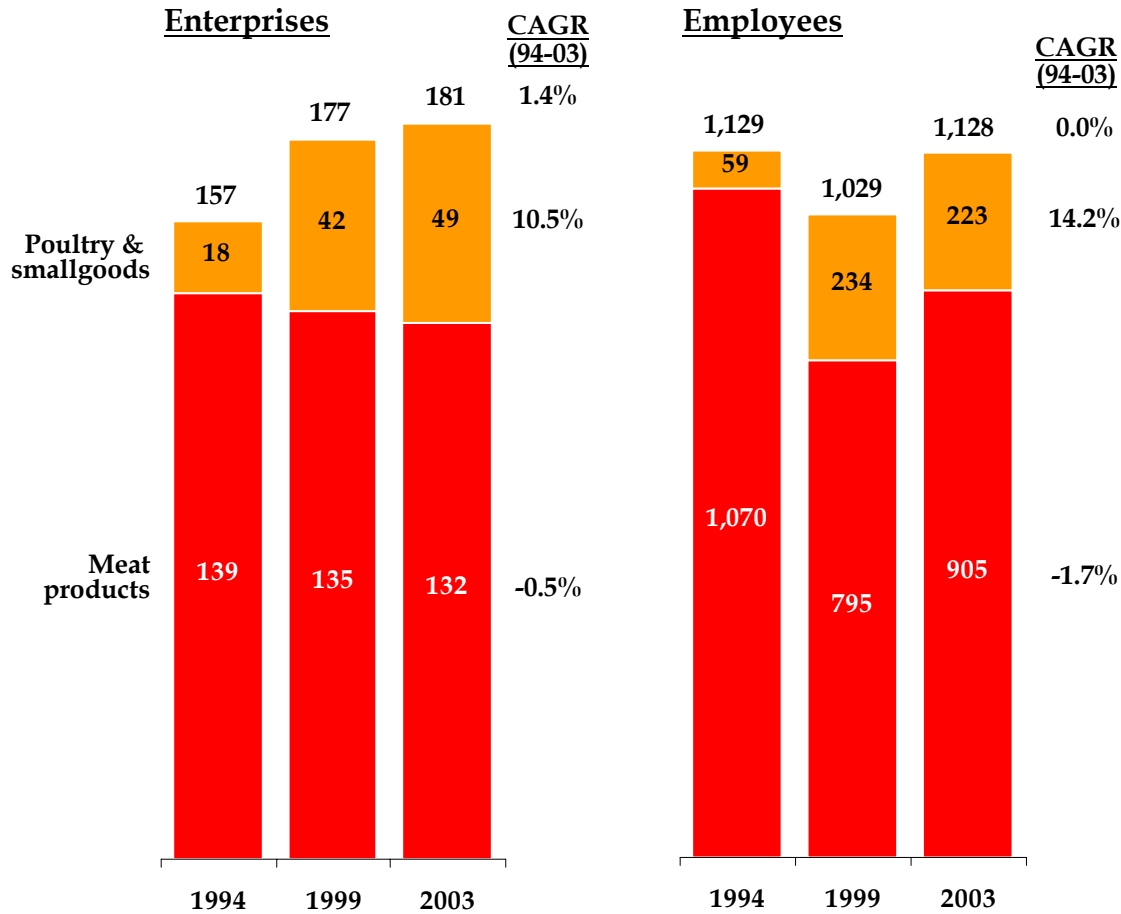
## Discussion Points

- Strongest growth in poultry
- Increasing role of dairy cull in beef industry (e.g. veal growth)

# MEAT WHOLESALING

While the number of meat wholesalers is increasing, employment is flat

Meat wholesaling enterprises by sub-sector  
(enterprises, actual, 1994-2003)



### Discussion Points

- Structural change in poultry and smallgoods wholesaling?

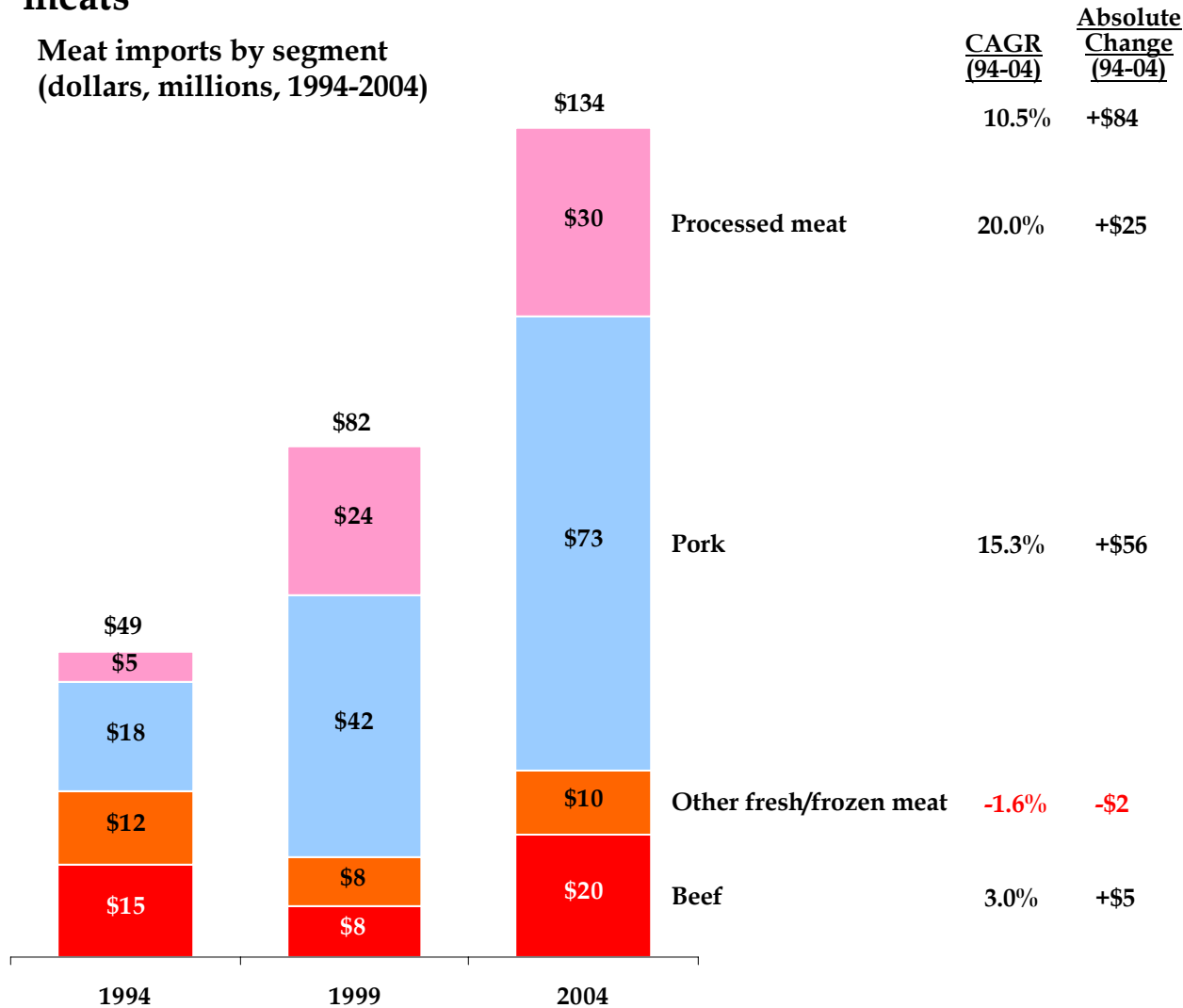
### Notes

- Includes working proprietors
- Total employees not FTE

## MEAT IMPORTS BY SEGMENT

Meat imports are growing strongly, off a low base, through the growth of pork and processed meats

Meat imports by segment  
(dollars, millions, 1994-2004)



### Discussion Points

- Why are pork imports increasing?

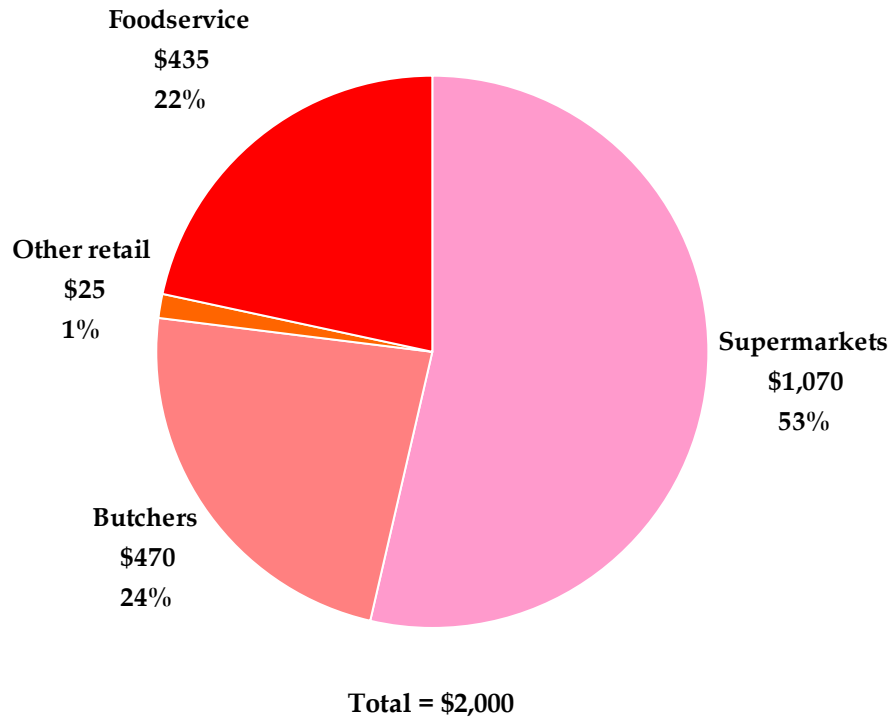
### Notes

- Classifications:
  - Beef (HS0201-0202)
  - Pork (HS0203)
  - Other fresh/frozen meat (remainder of HS02)
  - Processed canned/preserved meat (HS1601-1602)

# MEAT - DOMESTIC MARKET

## Domestic retailers and foodservice purchased about \$1.4 billion in meat last year

Domestic meat wholesale purchases by segment  
(dollars, millions, 2004)



### Discussion Points

- Relative strength of supermarkets

### Notes

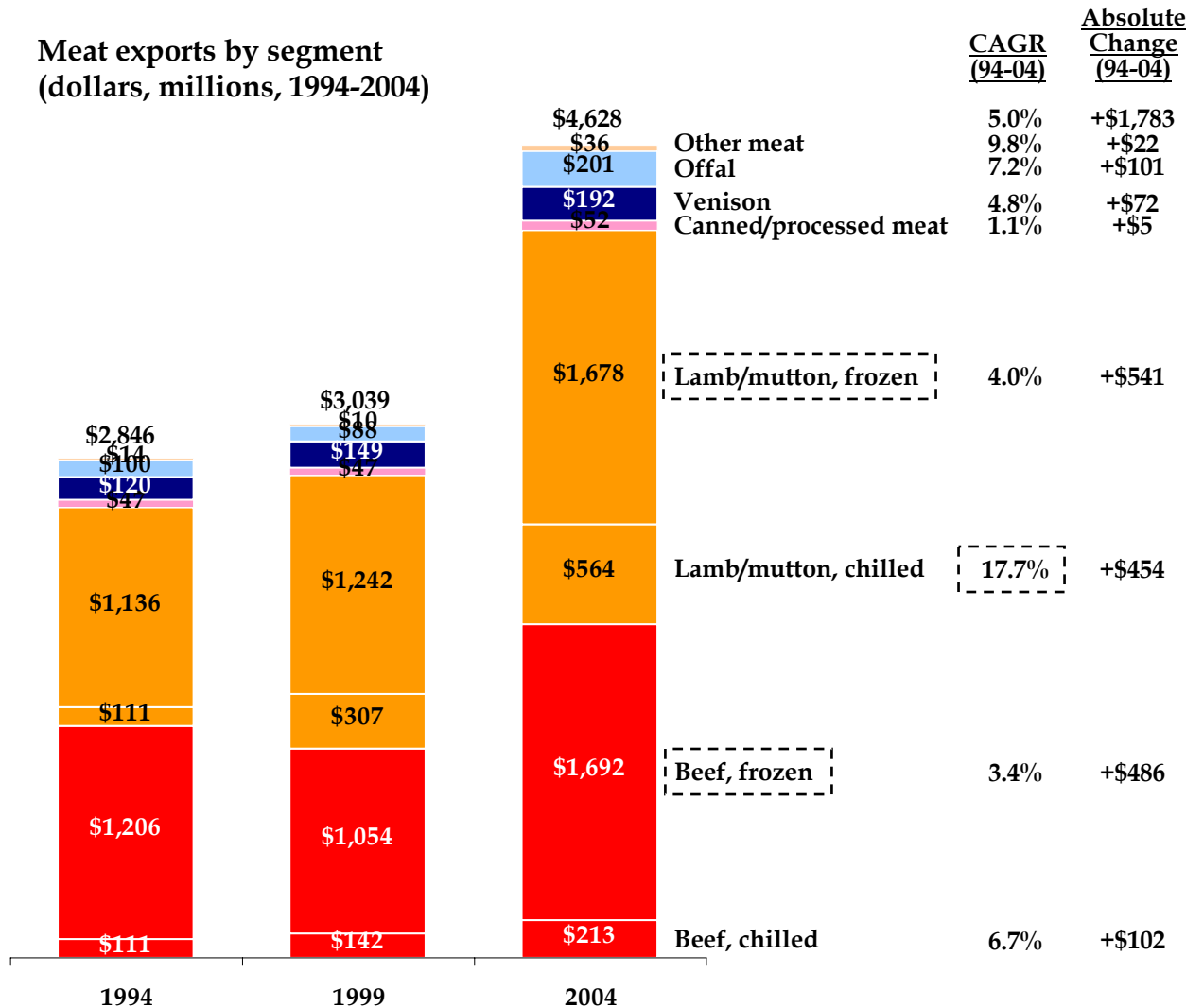
- Includes fresh beef, lamb, pork, chicken and other fresh meats
- Includes bacon, ham and small goods
- Does not include sales to manufacturing and secondary use (e.g. canned soup)



# MEAT EXPORTS BY SEGMENT

While chilled lamb is growing, too much of our meat is still exported frozen

Meat exports by segment  
(dollars, millions, 1994-2004)



## Discussion Points

- Why is so much meat still exported frozen?

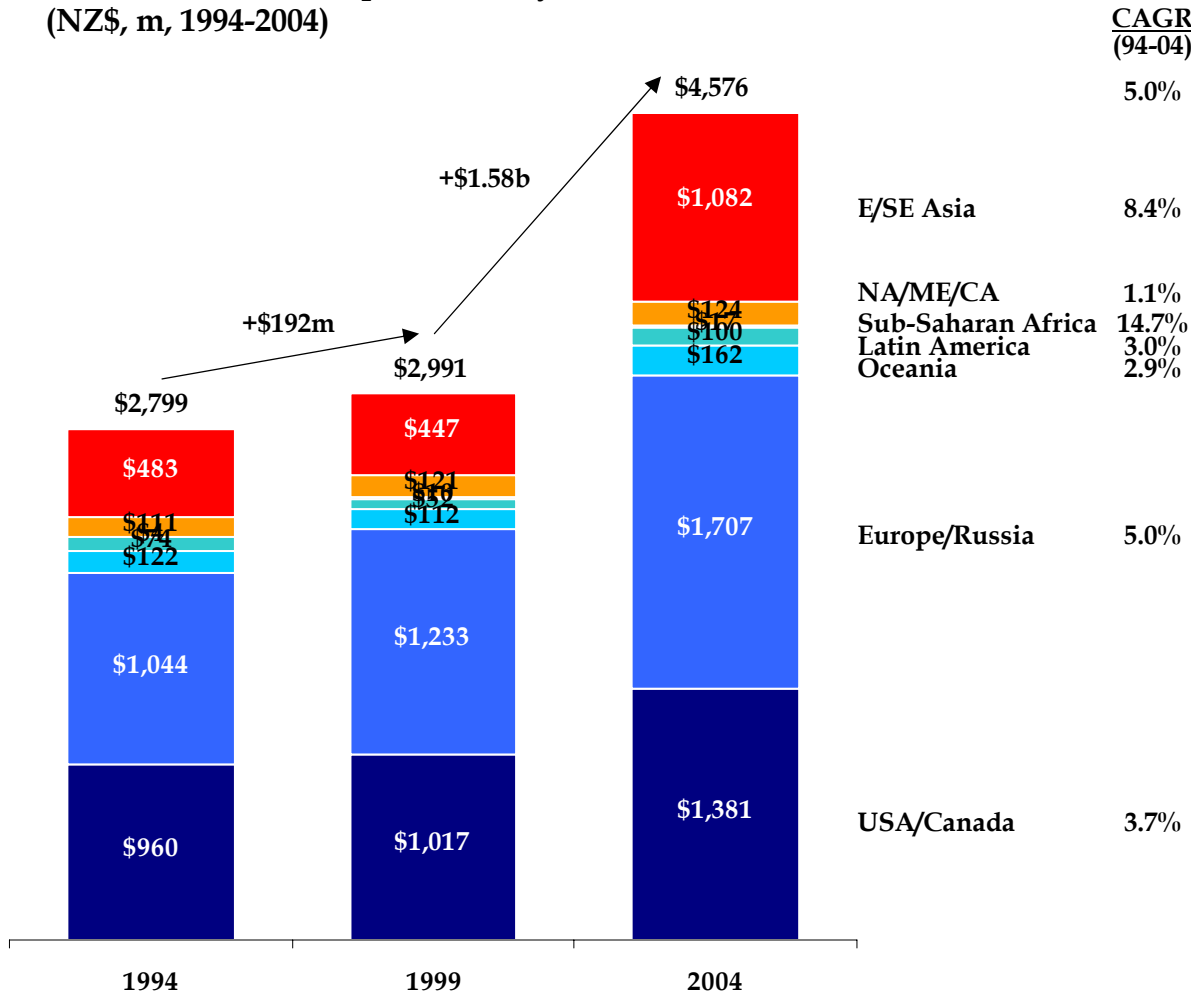
## Notes

- Frozen lamb is correct or export statistics are wrong (HS020430-HS020443)
- Revised classifications from earlier document
  - Meat now includes canned/preserved meat (HS1601-1602)

# NEW ZEALAND MEAT EXPORT VALUE BY DESTINATION

The total value of New Zealand's meat exports have risen dramatically in the past five years, primarily through increased sales to Asia and Europe

New Zealand meat export value by destination  
(NZ\$, m, 1994-2004)



### Discussion Points

- What were the drivers of the sales growth in the 99-04 period? How sustainable is this growth?

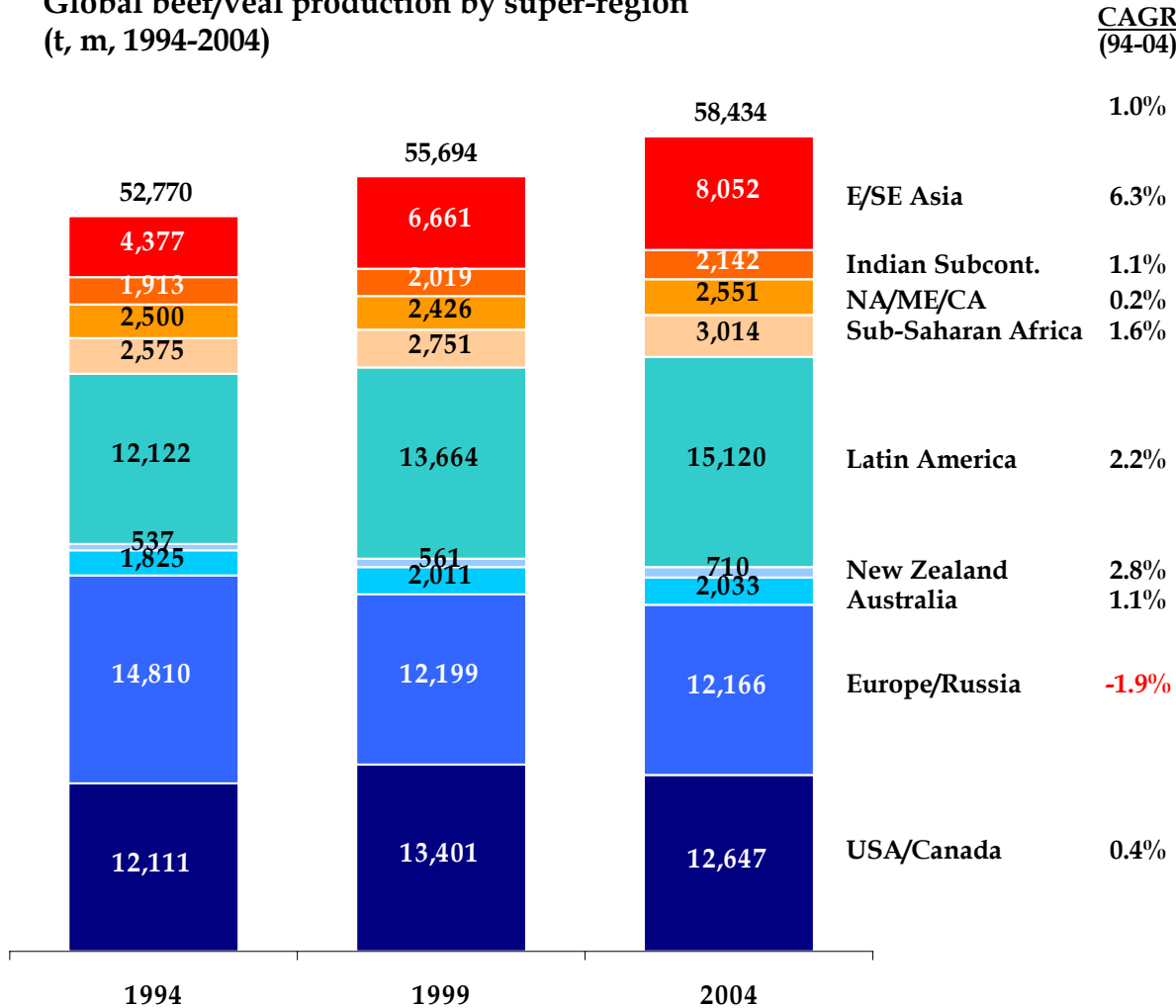
### Notes

- Excludes canned/ preserved meat (HS1601-1602) which accounted for \$52m in 2004

## BEEF PRODUCTION VOLUME BY REGION

Beef production is growing faster in New Zealand than in any other region other than Asia; US/Canada production is stagnant and European production is declining

Global beef/veal production by super-region  
(t, m, 1994-2004)



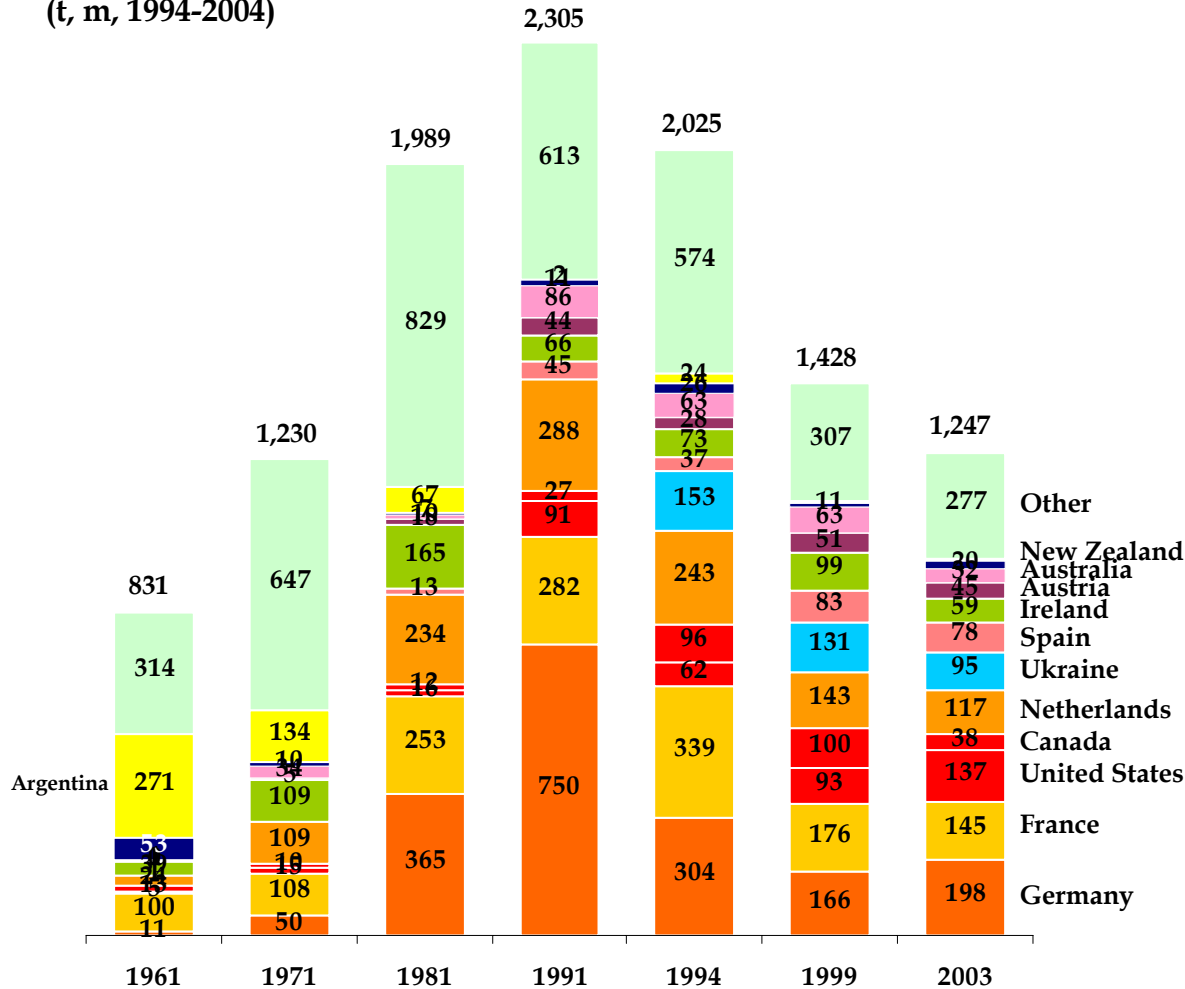
### Discussion Points

- What is E/SE Asia’s ultimate potential for beef production? What are the limiting factors?
- Why is New Zealand production growing more than twice as fast as Australia’s?

# BEEF/VEAL EXPORT VOLUME BY MAJOR COUNTRY

## New Zealand is a minor beef exporter (17<sup>th</sup> by volume)

Global beef/veal export volume by major exporting country (t, m, 1994-2004)



### Discussion Points

- Role of BSE in recent collapse? Other causes? Prognosis for recovery? Implications of recovery on returns?
- What is E/SE Asia's ultimate potential for beef production? What are the limiting factors?
- Why is New Zealand production growing more than twice as fast as Australia's?

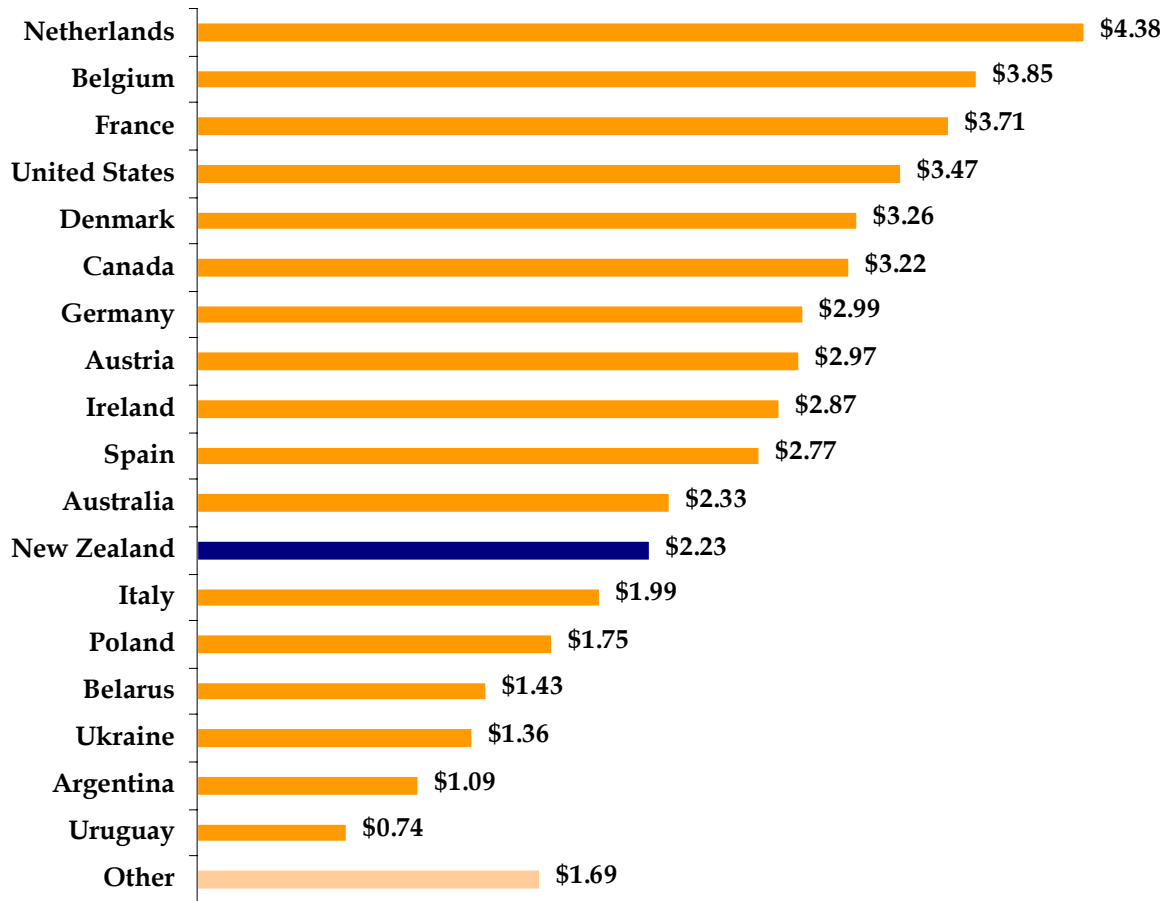
### Notes

- Includes veal at source
- Includes inter-regional trade (i.e within Europe)
- Not shown are a number of countries that export more beef than New Zealand (Belarus, Italy, Denmark, Poland and Belgium)

# BEEF/VEAL EXPORT VALUE PER KILO BY MAJOR COUNTRY

## New Zealand get significantly less per kilo for its beef

Beef/veal export value per kilogram by select major exporting country (US\$ per kilogram, 2004)



### Discussion Points

- Do customers prefer feedlot beef?
- Why do we freeze high quality “clean green” grass fed beef and sell it so cheaply?

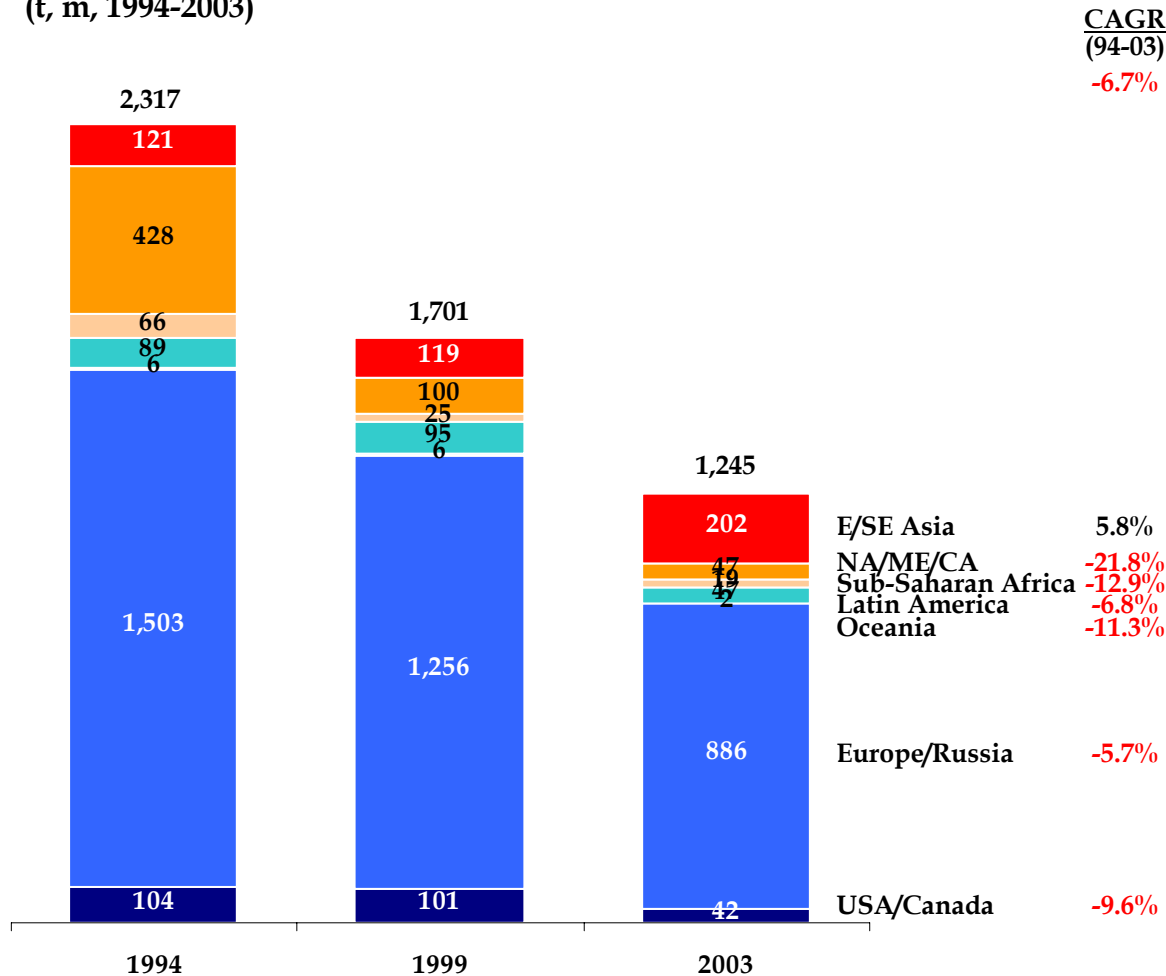
### Notes

- Includes veal at source

# BEEF IMPORT VOLUME BY REGION

Global beef/veal imports have collapsed over the past ten years

Global beef/veal imports by super-region  
(t, m, 1994-2003)



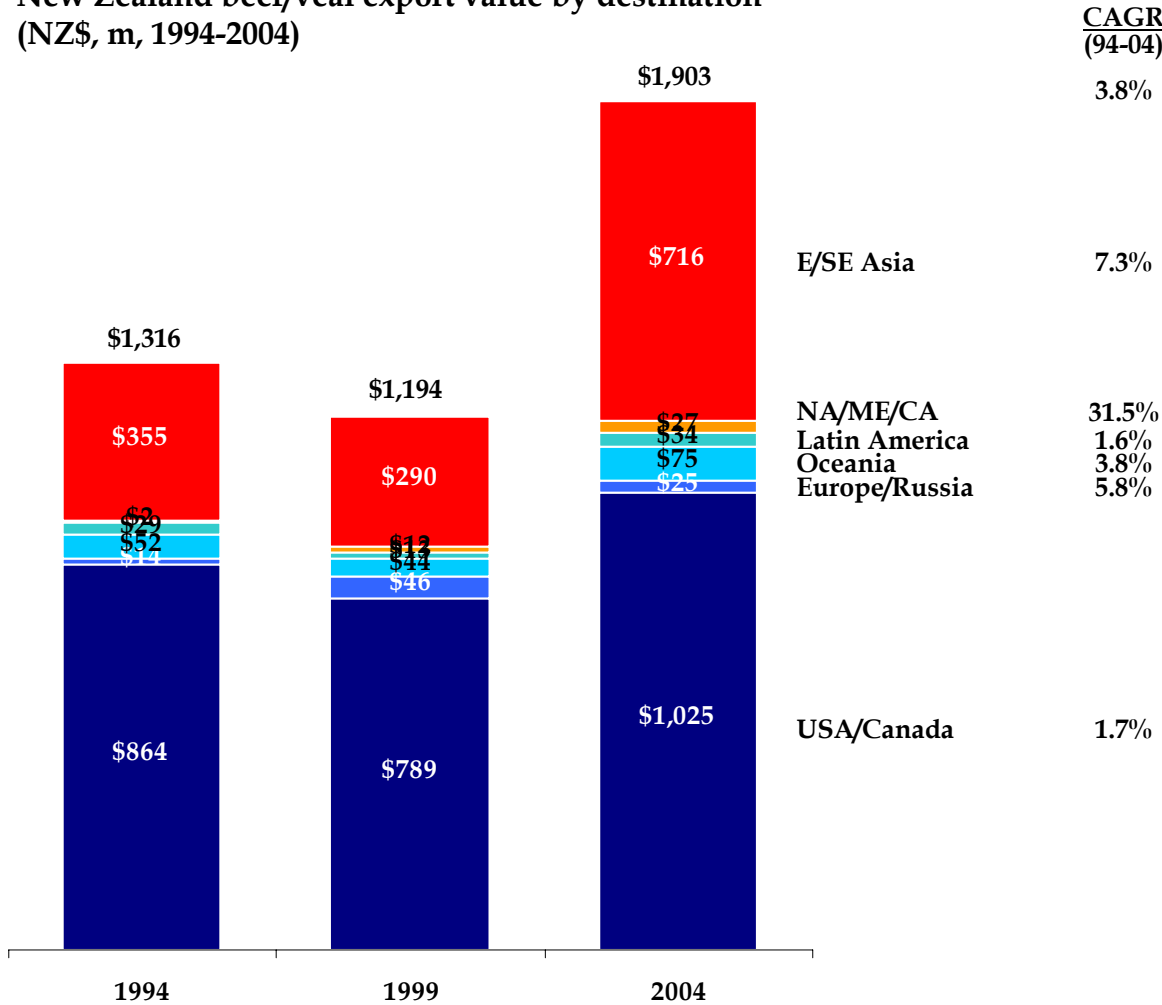
## Discussion Points

- Why are global beef/veal export volumes collapsing?
- Will the situation turn around or will there be a bigger fight for a smaller pie?
- What proteins are gaining share in Europe?
- Have underlying consumer preferences changed forever?

## NEW ZEALAND BEEF/VEAL EXPORT VALUE BY DESTINATION

While the US has traditionally been New Zealand's key market, growth in beef exports is coming primarily from Asia

New Zealand beef/veal export value by destination  
(NZ\$, m, 1994-2004)



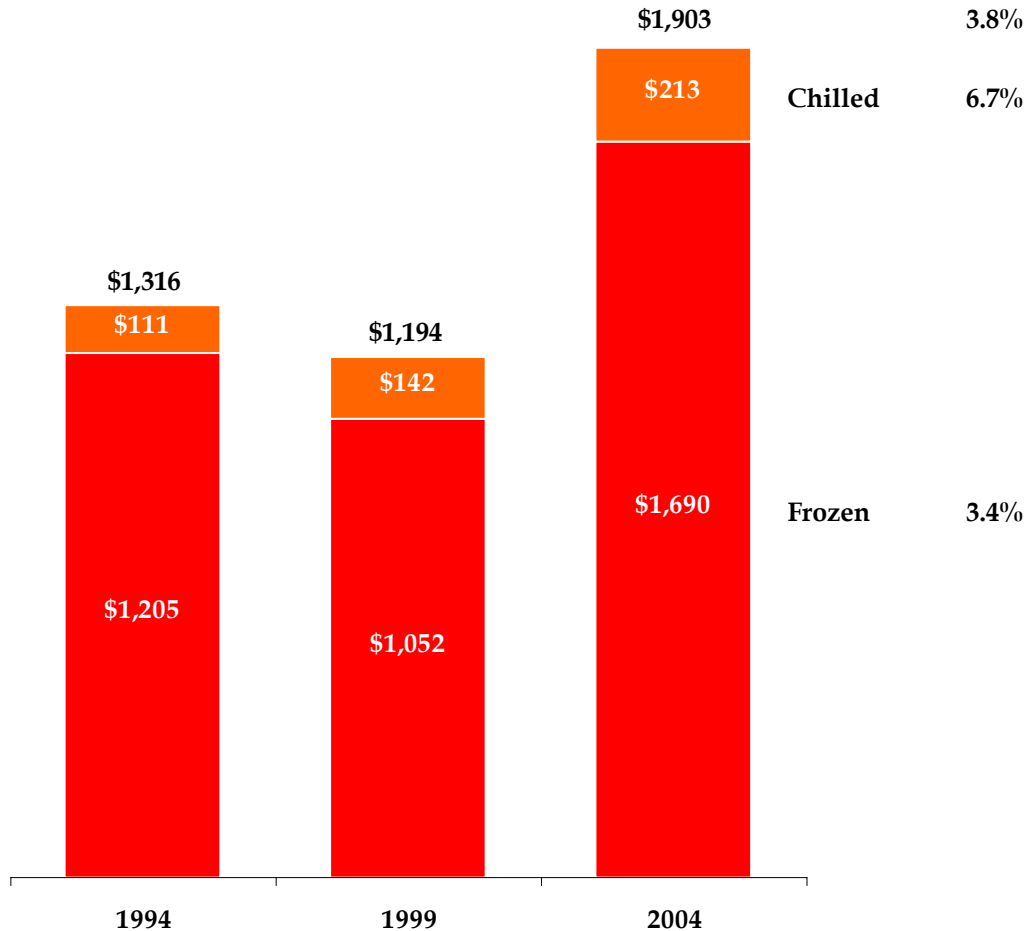
### Discussion Points

- What were the drivers of the sales growth in the 99-04 period? How sustainable is this growth?

## BEEF EXPORT VALUE BY FORM

While chilled beef exports are growing, most of New Zealand’s export beef is still frozen

New Zealand beef/veal export value by form  
(NZ\$, m, 1994-2004)



### Discussion Points

- Why isn't the move to chilled occurring faster?
- What channel or market segment uses frozen beef?
- Is meat frozen for historical or market-led reasons?

### Notes

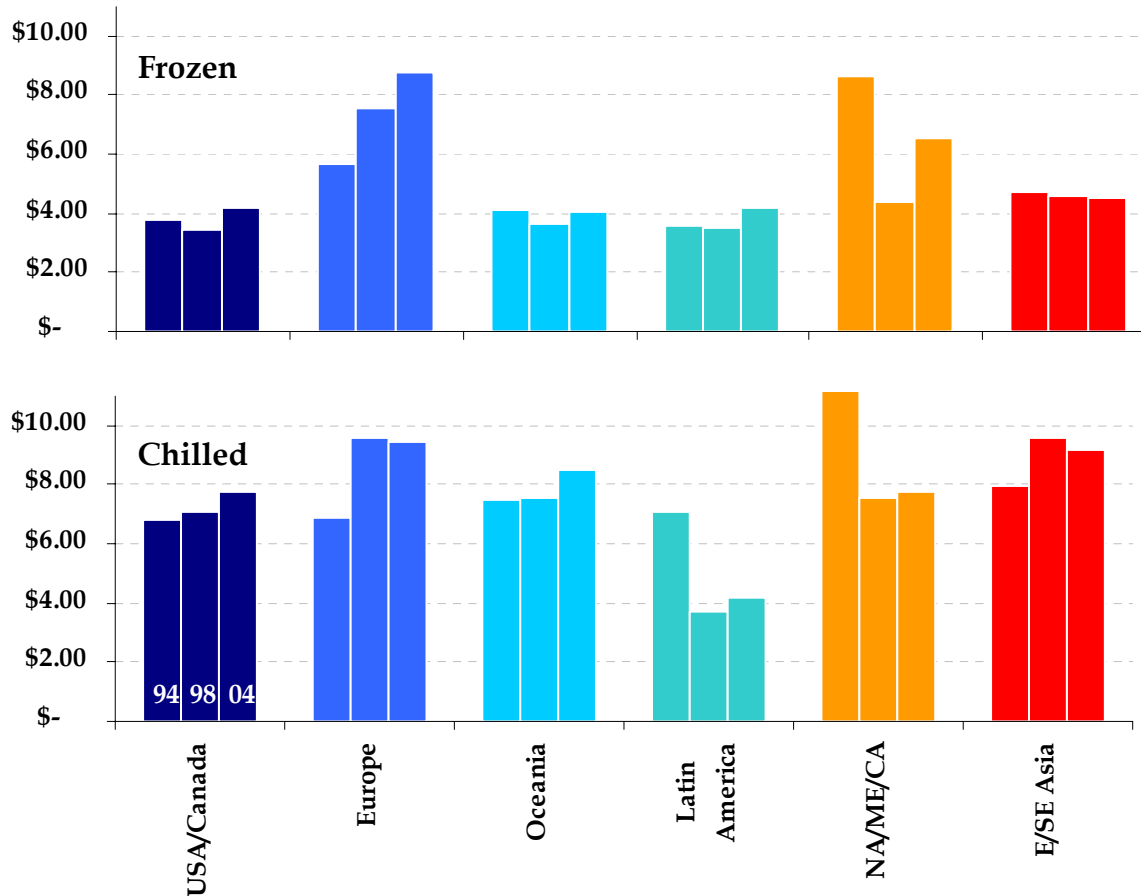
- Slight variation with earlier summary present at data source



# NEW ZEALAND BEEF/VEAL EXPORT VALUE PER KILO BY DESTINATION

Overall, the export unit value of beef has risen in the last five years

New Zealand beef/veal export value per kg by destination (NZ\$, 1994-2004)



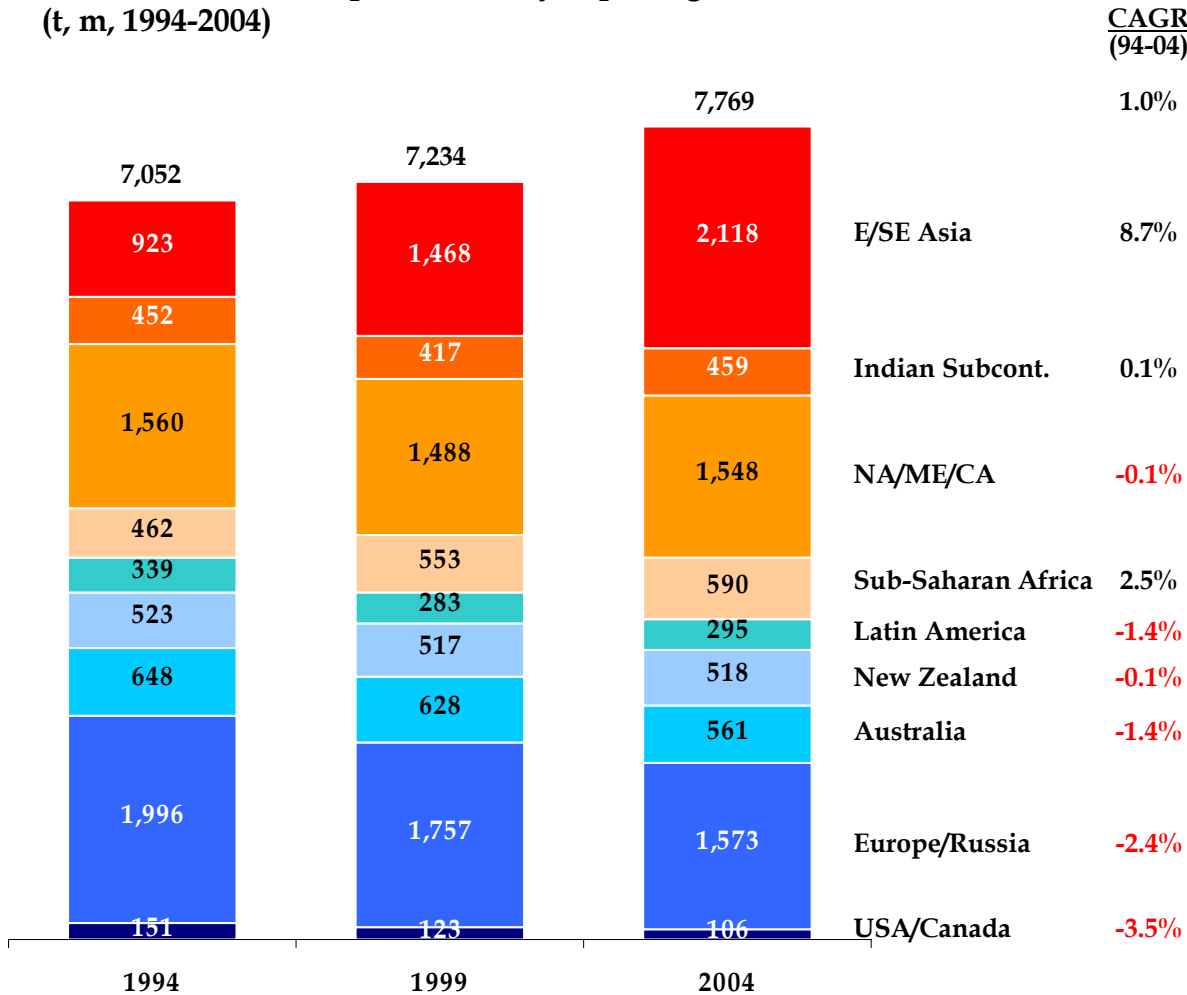
## Discussion Points

- What caused the rapid growth in value per kg in exports to Europe in frozen and chilled? Is this sustainable?
- Why do we get more for our frozen meat in Europe than in the US/Canada and Asia?
- Why are returns consistently higher in Asia than the US/Canada?

# LAMB/MUTTON PRODUCTION VOLUME BY REGION

Lamb/Mutton production is declining in the developed world and stagnant in the Arabic world, but growing strongly in Asia

Global lamb/mutton production by super-region (t, m, 1994-2004)



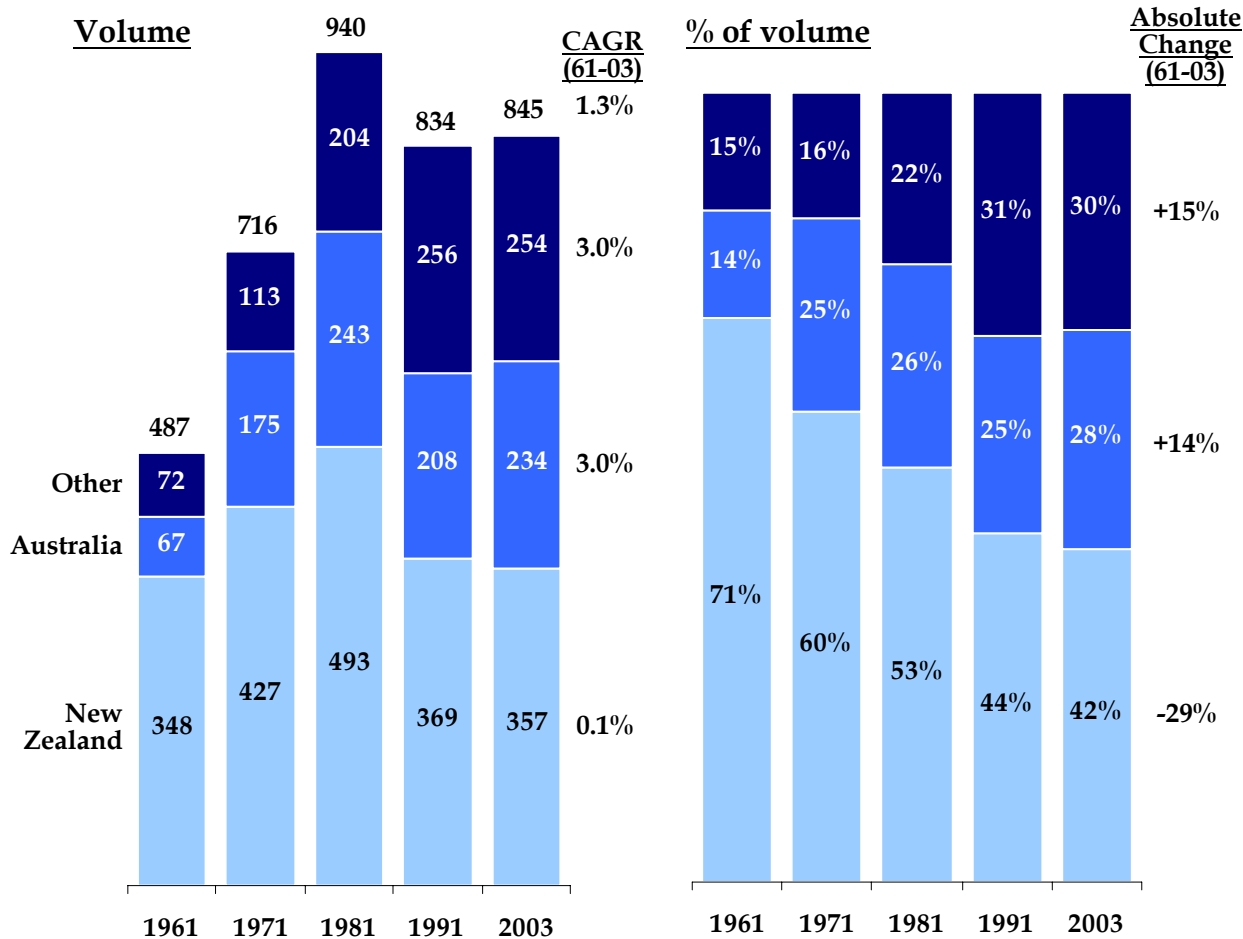
## Discussion Points

- What is E/SE Asia’s ultimate potential for lamb production? What are the limiting factors?
- Why is New Zealand lamb/mutton production falling?

# LAMB/MUTTON EXPORT VOLUME BY SELECT COUNTRY

## The importance of New Zealand in the world lamb trade is falling

Global lamb/mutton exports by select country  
(t, thousands, 1961-2003)



### Discussion Points

- Why are we losing share to Australia?
- Why haven't we seen New Zealand meat processors buying into Australia to increase their market power?

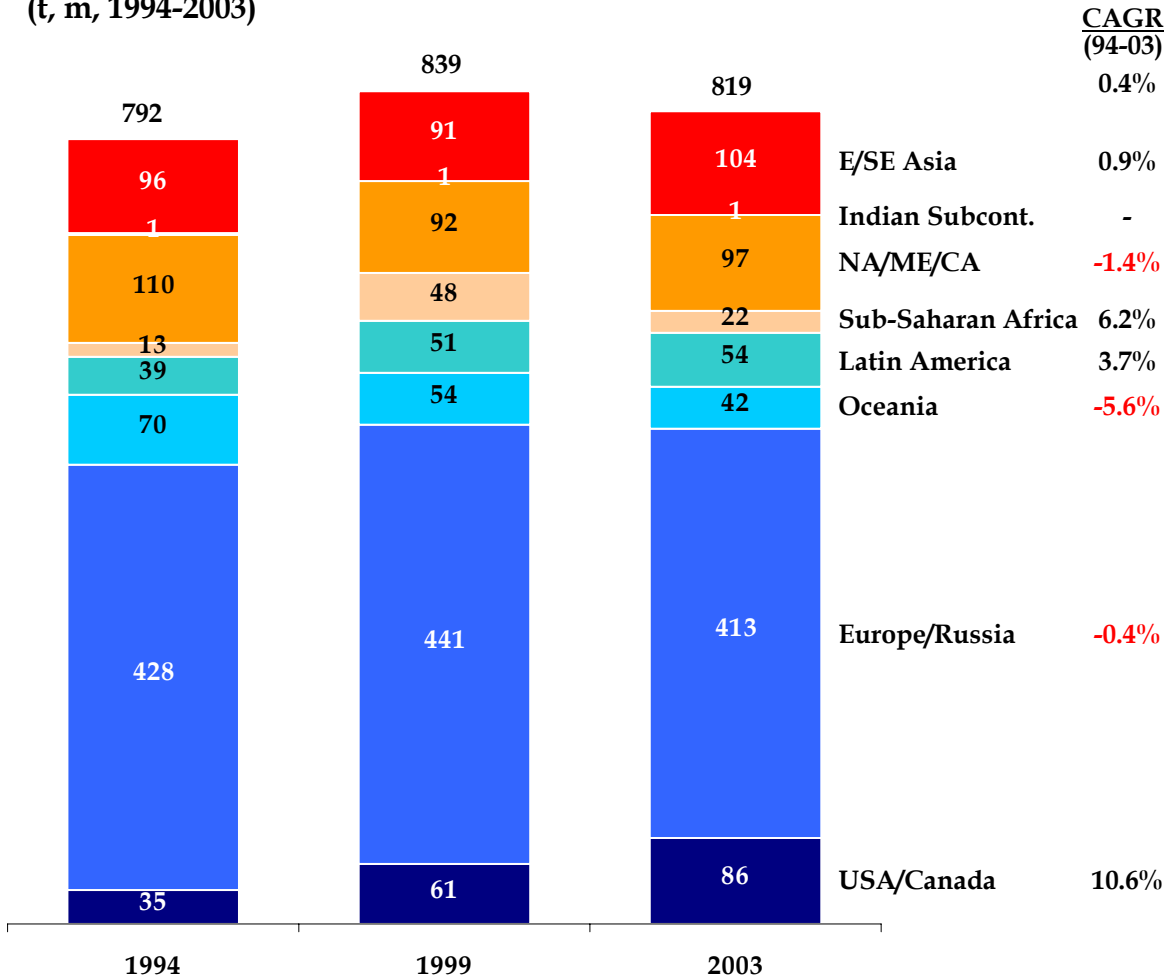
### Notes

- Total world exports do not match total world imports at source (under reporting?)

# LAMB/MUTTON IMPORT VOLUME BY REGION

The US/Canada has been the key growing importer of lamb

Global lamb/mutton imports by super-region  
(t, m, 1994-2003)



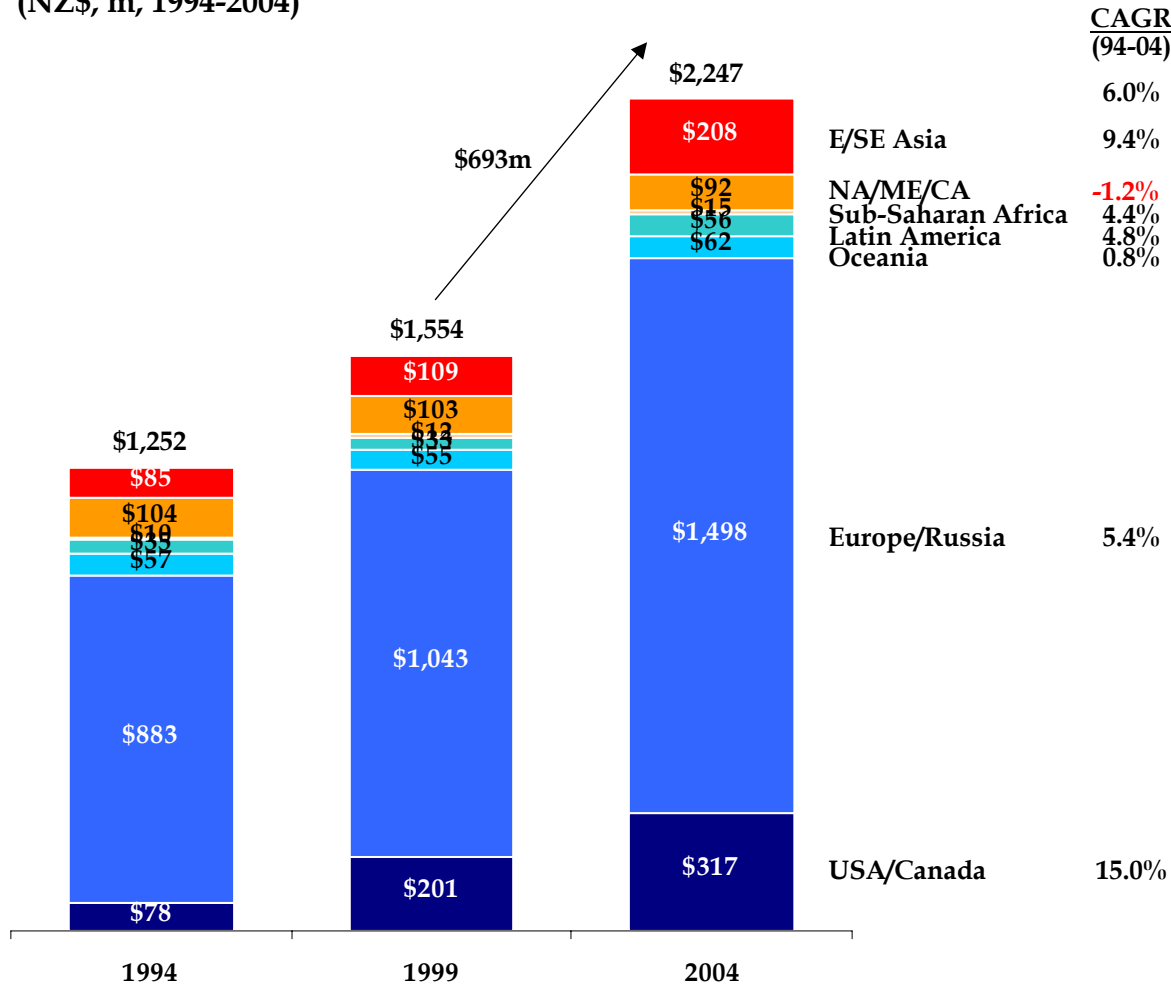
## Discussion Points

- Given US lamb consumption is declining, at what point will imports stop substituting for domestic production?
- How close is Asia to being a net lamb exporter?

# NEW ZEALAND LAMB/MUTTON EXPORT VALUE BY DESTINATION

The value of New Zealand lamb exports are up

New Zealand lamb/mutton export value by destination  
(NZ\$, m, 1994-2004)



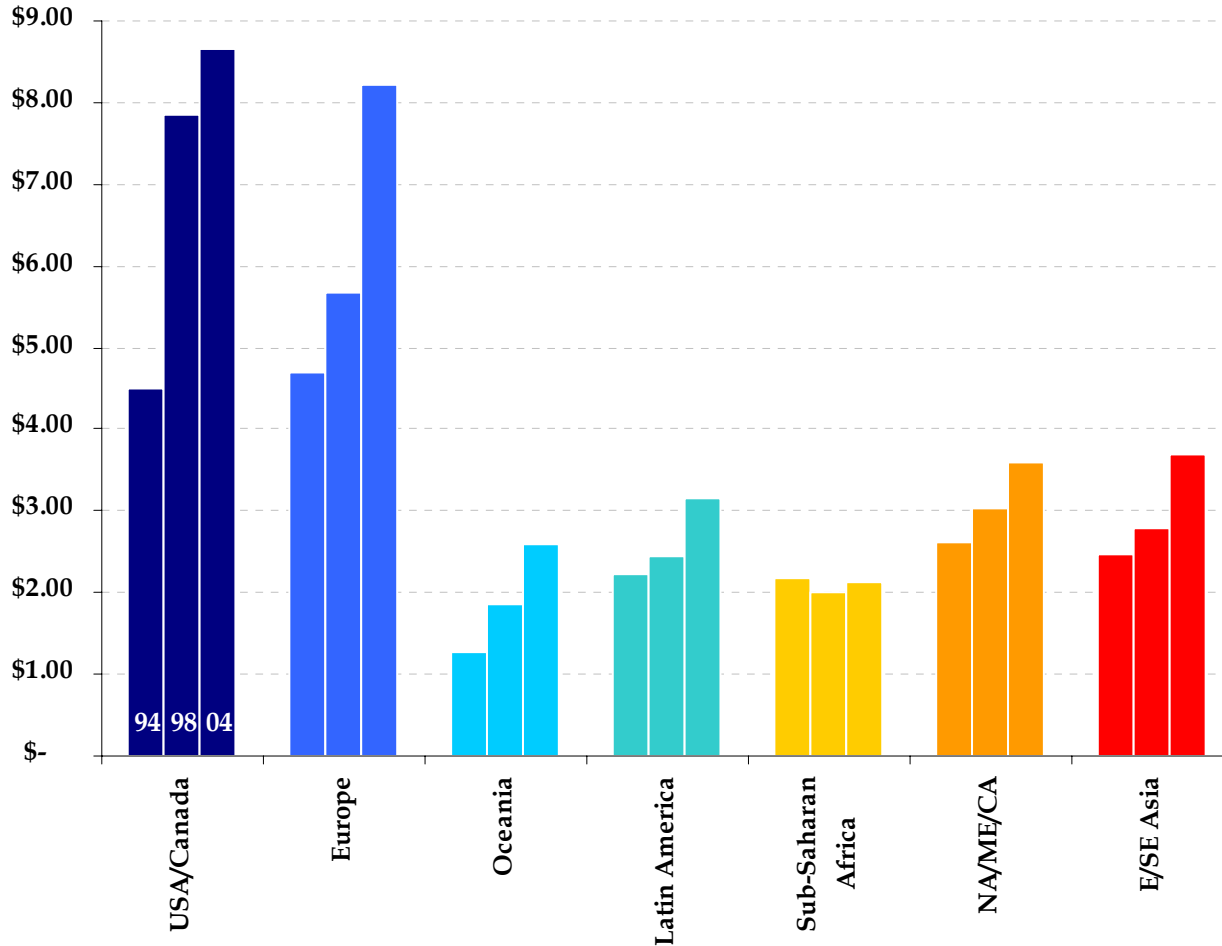
## Discussion Points

- What were the drivers of the almost \$700m export sales growth in the 99-04 period? How sustainable is this growth?

# NEW ZEALAND LAMB/MUTTON EXPORT VALUE PER KILO BY DESTINATION

## The value per kilo of New Zealand lamb exports to the US/Canada and Europe is up dramatically

New Zealand lamb/mutton export value per kg by destination  
(NZ\$, 1994-2004)



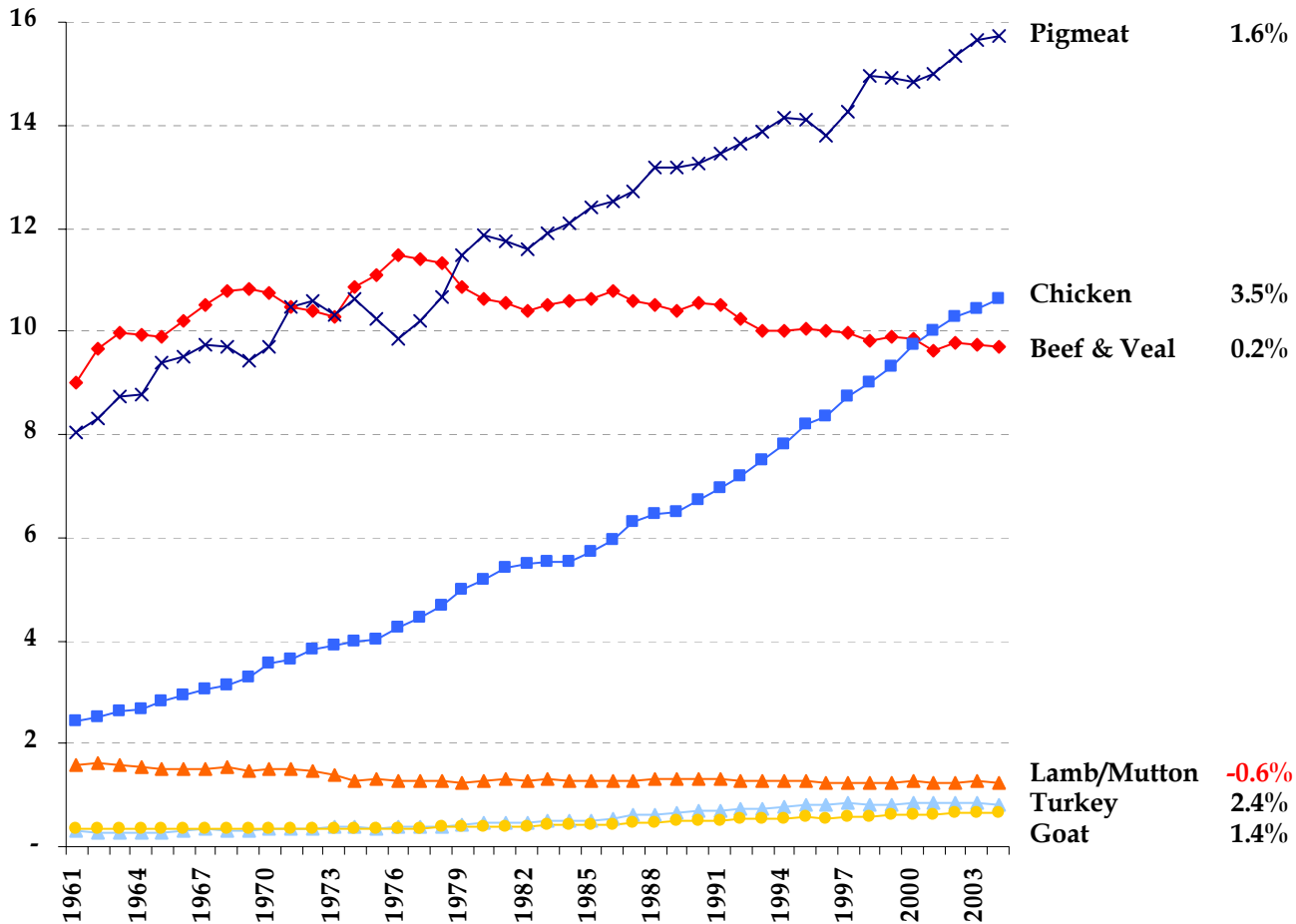
### Discussion Points

- What is driving dramatic per kilo price increases into the US/Canada and Europe?
- Can we encourage other parts of the world - such as Asia - to pay more for their lamb?

# GLOBAL PER CAPITA MEAT CONSUMPTION

On a global basis, pigmeat and chicken consumption appear to be growing at the expense of beef and lamb

Global per capita meat consumption by select species (kg/capita, 1961-2004)



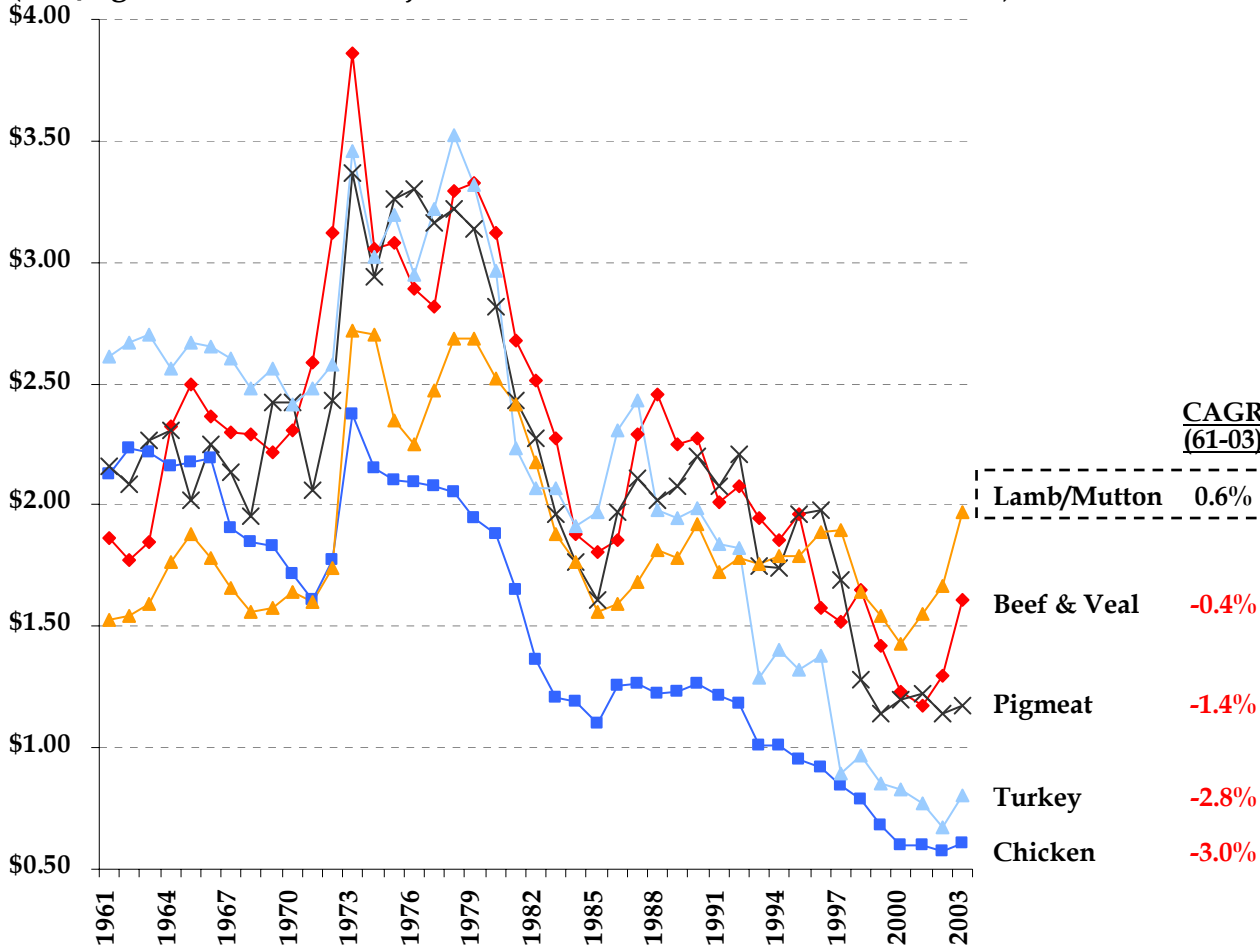
## Discussion Points

- Intensively farmed vertically integrated animal systems growing at the expense of pasture based production
- Why has beef consumption fallen in the last ten years - a period of rising global incomes?
- Why is global lamb consumption falling while goat consumption is rising?
- Does New Zealand produce the meats of the past not the future?
- What lessons should be drawn from the success of turkey?

# INFLATION-ADJUSTED PRICE OF MEAT

This appears to be directly related to the relative change in price

**Inflation adjusted world price for major meats  
(US\$/kg., FOB, inflation adjusted; indexed to 1982 dollars; 1961-2003)**



## Discussion Points

- Lamb is the only major meat whose price has actually risen over the past forty years
- In 1961 chicken was 33% more than lamb; today it is 72% cheaper
- On average the price of chicken has fallen 3% per year for the past four decades
- Threat of vertical integration accelerating in beef (cf Smithfield)

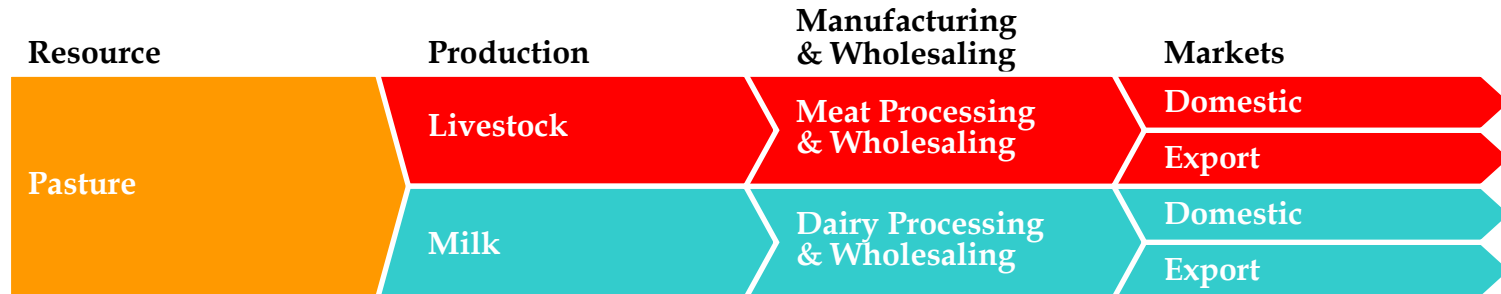
## Notes

- All values are inflation adjusted US dollars indexed to 1982 using the US CPI
- Represents value of all world trade (i.e. including intra-EU)



# 1. PASTURE BASED PRODUCTION - DAIRY

The second key output of pasture land is milk for the dairy industry



## SWOT ANALYSIS - DAIRY INDUSTRY

New Zealand currently has a strong position in dairy, but as a small milk producer in an absolute sense, is vulnerable to slight changes in global production

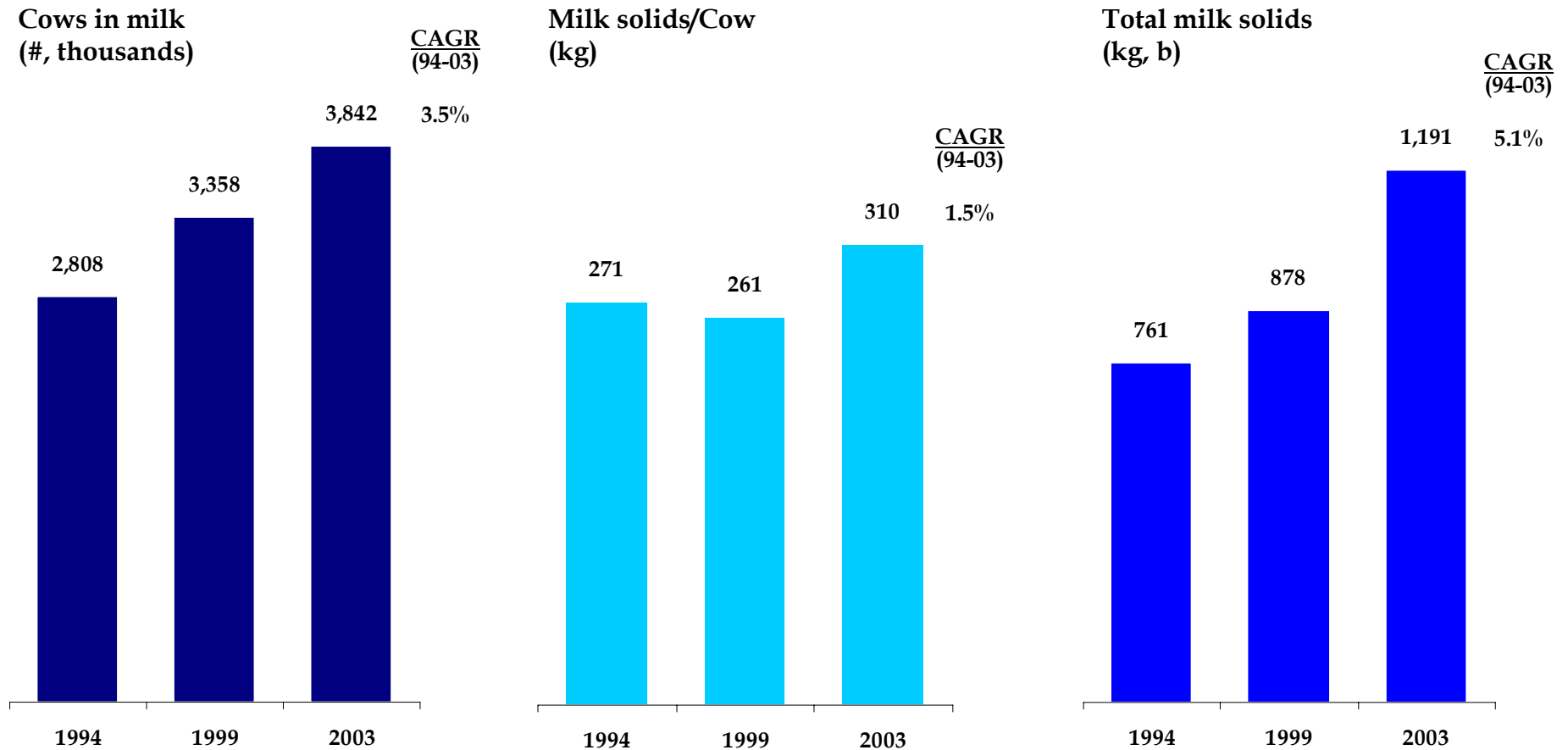
SWOT analysis of New Zealand in global dairy

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>- Low cost pasture-based dairy production system</li> <li>- National champion Fonterra with resources to address global markets and opportunities</li> <li>- Growing market leadership position in Australasia/Oceania</li> </ul>	<ul style="list-style-type: none"> <li>- All our eggs in one basket (Fonterra)</li> <li>- No rich dairy cultural heritage or tradition to draw from for new product development (vs. France or Italy)</li> <li>- Small milk producer in an absolute sense (~2%)</li> <li>- Limited defensibility of commodity and ingredient position</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>- Consolidation of Australian market</li> <li>- Growth of incomes in Asia</li> <li>- Growing global dairy product consumption</li> <li>- Growth of nutraceuticals and functional foods</li> </ul>	<ul style="list-style-type: none"> <li>- Growing dairy production in Latin America and other pasture-based production systems</li> <li>- Continued improvements by intensive feed-based systems returning them to low cost status (e.g. California)</li> <li>- Changing global weather patterns</li> </ul>

## DAIRY - PRODUCTIVITY INDICATORS

New Zealand has been producing more milk by having more cows and by increasing production per head

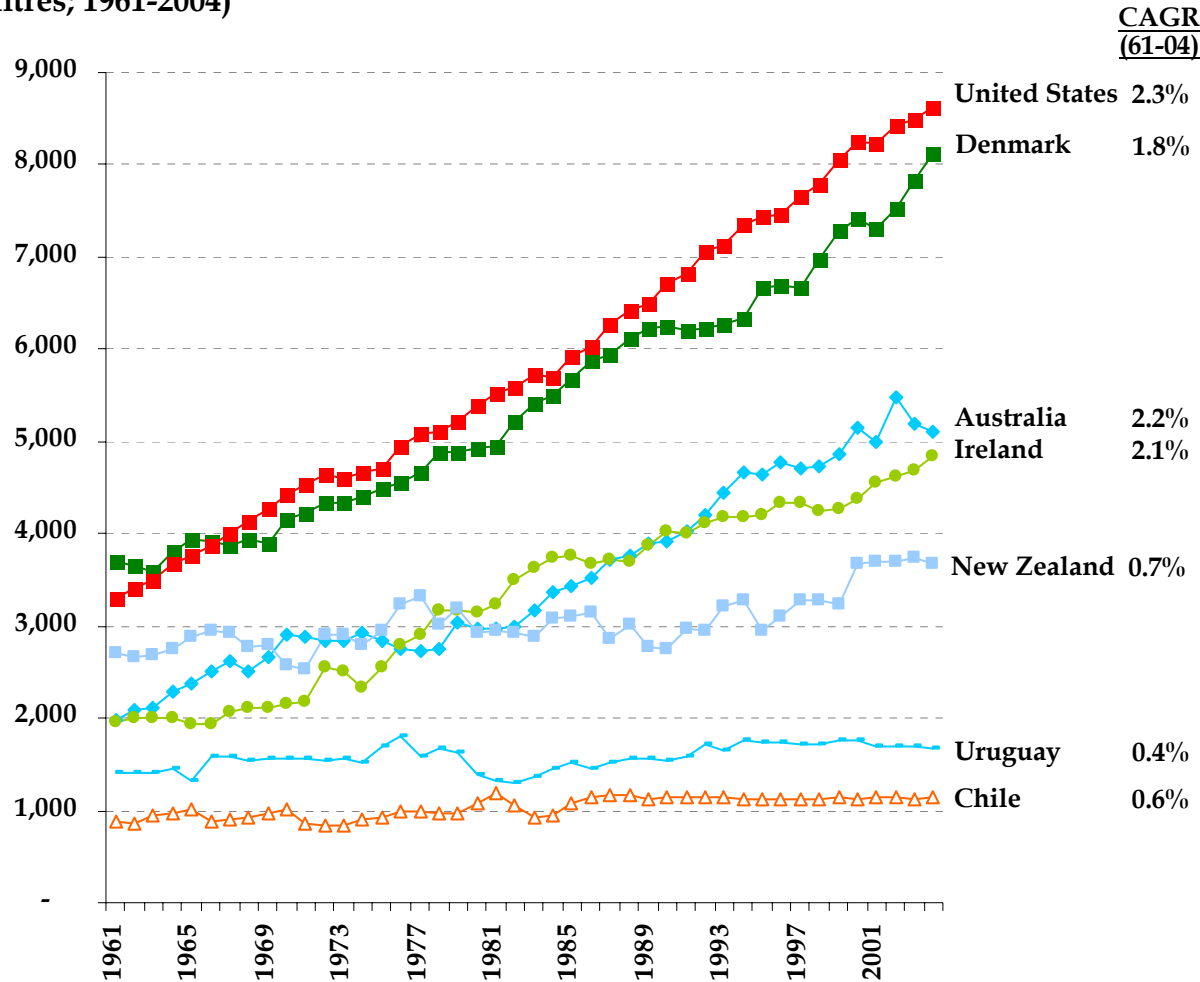
Key dairy productivity indicators  
(1994-2003)



# LOW MILK PER COW YIELDS VS. COMPETITORS

However, as a pastoral-based system, New Zealand still gets relatively low milk yields per animal

Milk production per cow (litres; 1961-2004)



## Discussion Points

- Clearly this is only one factor in overall competitiveness; where do we excel?
- Why? Management, breeding or grain-feeding?
- Interaction between cost and yield (i.e. can you drive up yield (e.g. irrigation) while remaining a low cost producer?)
- Drivers of superior performance of Ireland and Australia (New Zealand outperformed Ireland until 1976)
- At what yield does the U.S. return to being a competitive exporter? (projection: 2020: New Zealand 4,100 vs. US 12,300)

## Notes

- Uses milk not milksolids as there is no milksolids data available

## INDUSTRY STRUCTURE - DAIRY PROCESSING

**Dairy processing is concentrated in Fonterra, a national champion created in a government sanctioned mega-merger**

- Built on low cost inputs of milk/milkfat from grass-fed livestock
  - New Zealand is a low cost producer of milk as a result of grass-feeding dairy cows by efficient farmers
  - Grass growth is highly seasonal leading to big swings in milk production
  - New Zealand is not a low cost producer of grain, hence does not use significant additional feed (i.e. not a high input/high output model)
  
- Dairy processing is comprised of three segments, all with a strong Fonterra presence
  - Transport-friendly dairy products for export markets (Fonterra, Westland, Tatua)
  - Fluid milk and consumer dairy products for the local market (Fonterra/Mainland, NZDF, National Foods, United Milk)
  - Ice-cream for domestic consumption and export (Fonterra/Tip Top, Unilever, Kiwi, Emerald Foods, Talley's)
  
- Growing trans-Tasman/global integration driven by Fonterra

## KEY COMPANIES - DAIRY PROCESSING

While there are a number of players in the dairy industry, Fonterra is by far the largest

Key companies in the dairy products manufacturing and wholesaling sector

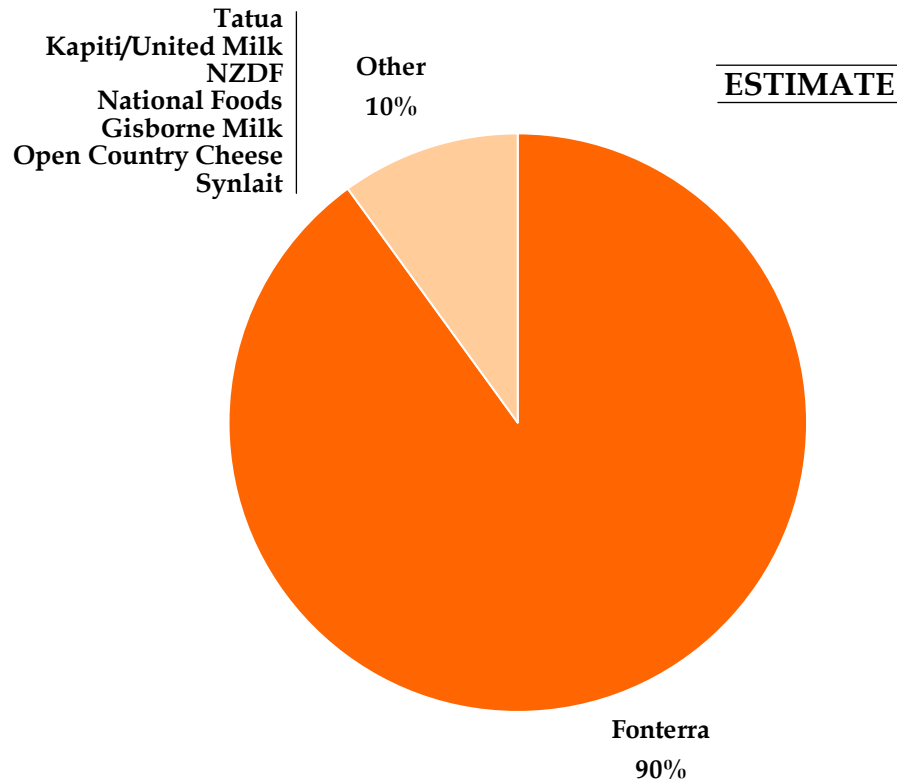
Company	Turnover (NZ\$; m; 2004)	Employees	Ownership	Activities
Fonterra Co-operative Group	\$11,830	19,600	New Zealand Cooperative	- Dairy processing (primarily for export) - Turnover includes sales of non-NZ subsidiaries
NZDF (formerly Mainland)	\$980	1,600	Rank Group	- Milk and dairy products for the domestic market - Previously Mainland Products (subsidiary of Fonterra); now Rank group
Fonterra Brands (formerly NZDF)	\$502	900	Fonterra Subsidiary	- Milk and dairy products for the domestic market - Previously owned by Rank Group; now Fonterra
Westland Milk Products	\$235	209	New Zealand Cooperative	- Dairy processing
Tip Top Ice Cream	\$140	400	Fonterra Subsidiary	- Subsidiary of Fonterra
Tatua Co-operative Dairy	\$110	200	New Zealand Cooperative	- Dairy processing
United Milk/Kapiti	?	226	New Zealand Cooperative	- Production of fluid milk, cheese and ice cream - Subsidiary of Foodstuffs (Wellington)
National Foods New Zealand	\$50	65	Philippines Public Listed	- Yoghurt and dairy foods - Subsidiary of National Foods Australia; owned by San Miguel, Philippians

Others  
+ Emerald Foods  
+ Gisborne Milk

# DAIRY - MARKET SHARE

## One company, Fonterra, dominates the New Zealand dairy industry

New Zealand dairy sales market share  
(% of sales; 2004)



### Discussion Points

- Who is driving product innovation?
- Why is there no major international dairy company participation in the New Zealand market?
- How does this situation benefit the New Zealand consumer?

### Notes

- Market share represents New Zealand wholesale domestic sales and export sales (at border); does not include international sales or margins
- Fonterra controls 95% of milk supply

## ACQUISITIONS - DAIRY PROCESSING

The dairy processing sector has experienced a decade of acquisitions and consolidation

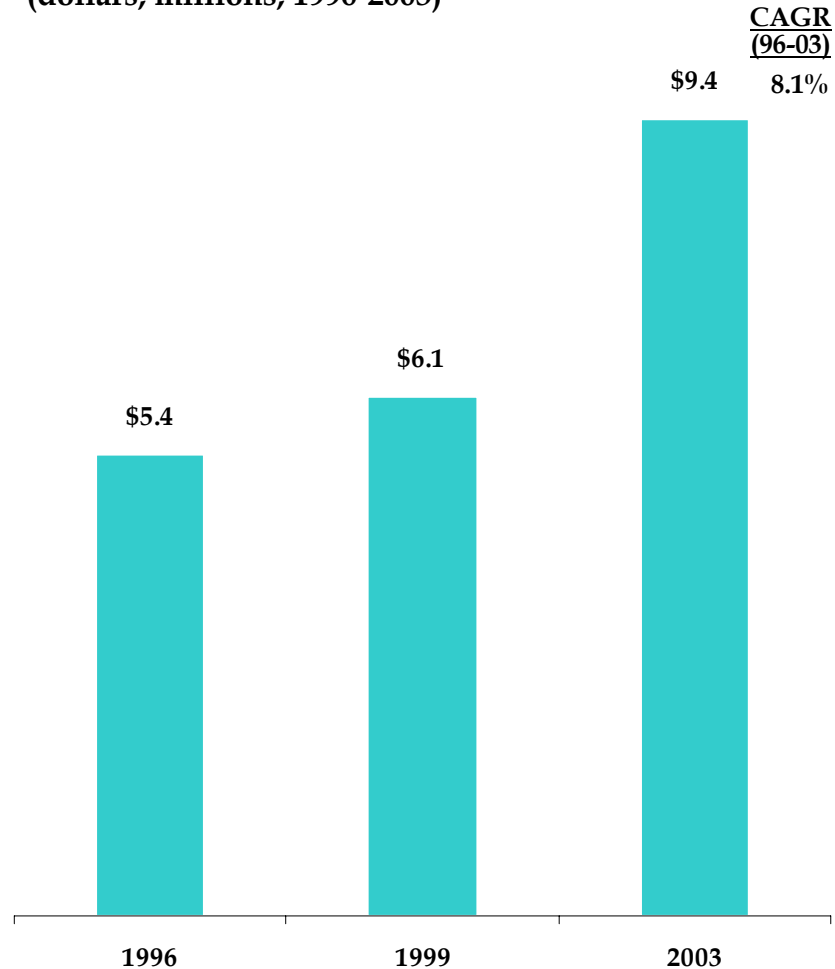
Acquiror	Acquiree	Date	Notes
Fonterra	New Zealand Dairy Foods	Aug 2005	Fonterra asset swap with Rank Group; Fonterra gets NZDF less some brands/products
Rank Group	Mainland Products	Aug 2005	Rank Group asset swap with Fonterra; Rank gets Mainland Products less Mainland Cheese (and some others)
Emerald Foods	New Zealand Natural	Oct 2004	Foodservice ice cream franchise business
Foodstuffs Wellington	United Milk Ltd.	Oct 2003	Foodstuffs Wellington (supermarket retailer) buys out other shareholders in milk & cheese venture Changes company name to Kapiti Fine Foods
United Milk Ltd	Kapiti Cheese	Aug 2003	Foodstuffs Wellington (supermarket wholesaler) subsidiary acquires specialty cheese company
Rank Group	New Zealand Dairy Foods Holdings	Feb 2002	Fonterra forced to divest NZDF as part of mega-cooperative formation
International Dairy Ventures (IDV)	NZ operations of Chateau Crème Delight	Oct 2003	Movenpick NZ manufacturing operations; Nestle bought Movenpick globally but sold New Zealand operations
Fonterra/Global Dairy	NZ Dairy Board, New Zealand Dairy Group, Kiwi Dairies	2001	Creation of mega-cooperative from New Zealand Dairy Board, New Zealand Dairy Group and Kiwi Dairies following extended court/legal/government battle
New Zealand Dairy Foods	Puhoi Valley Cheese	Nov 2000	Cheese company with \$10m turnover



## DAIRY MANUFACTURING TURNOVER GROWTH

The dairy manufacturing sector, primarily Fonterra, has delivered strong growth

Dairy manufacturing turnover  
(dollars, millions, 1996-2003)



### Discussion Points

- Drivers of recent growth

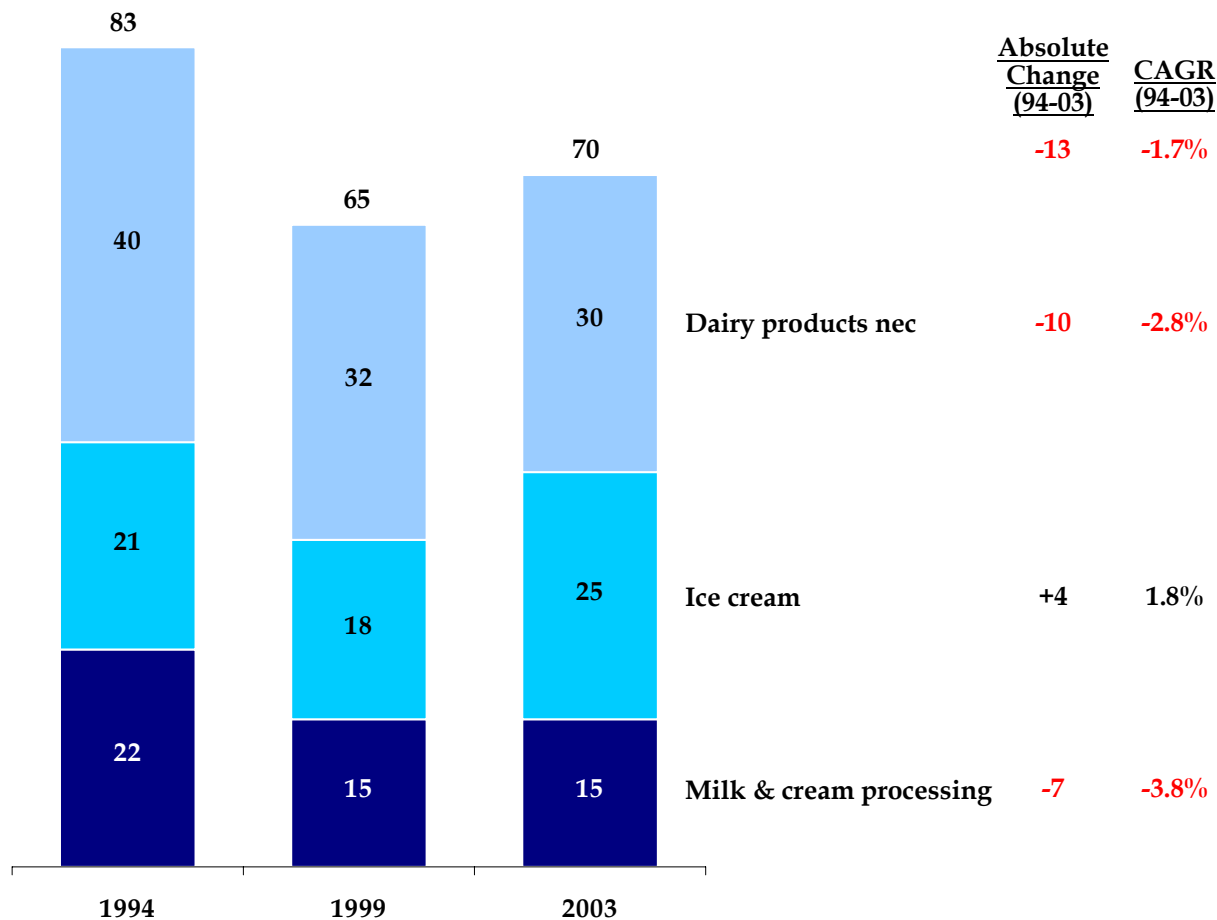
### Notes

- Part of jump between 99-03 may be a result of Fonterra's Mainland Products being reclassified as a manufacturer?
- No data available prior to 1996 (AES); 2004 data not yet available
- Represents turnover of New Zealand operations, not global activities
- Processing turnover only; no separate data availability in AES on dairy wholesale;

## DAIRY MANUFACTURING ENTERPRISES

The number of dairy manufacturing enterprises appears to have recovered slightly from a decline in the mid-90's

Dairy manufacturing enterprises by sub-sector  
(enterprises, actual, 1994-2003)



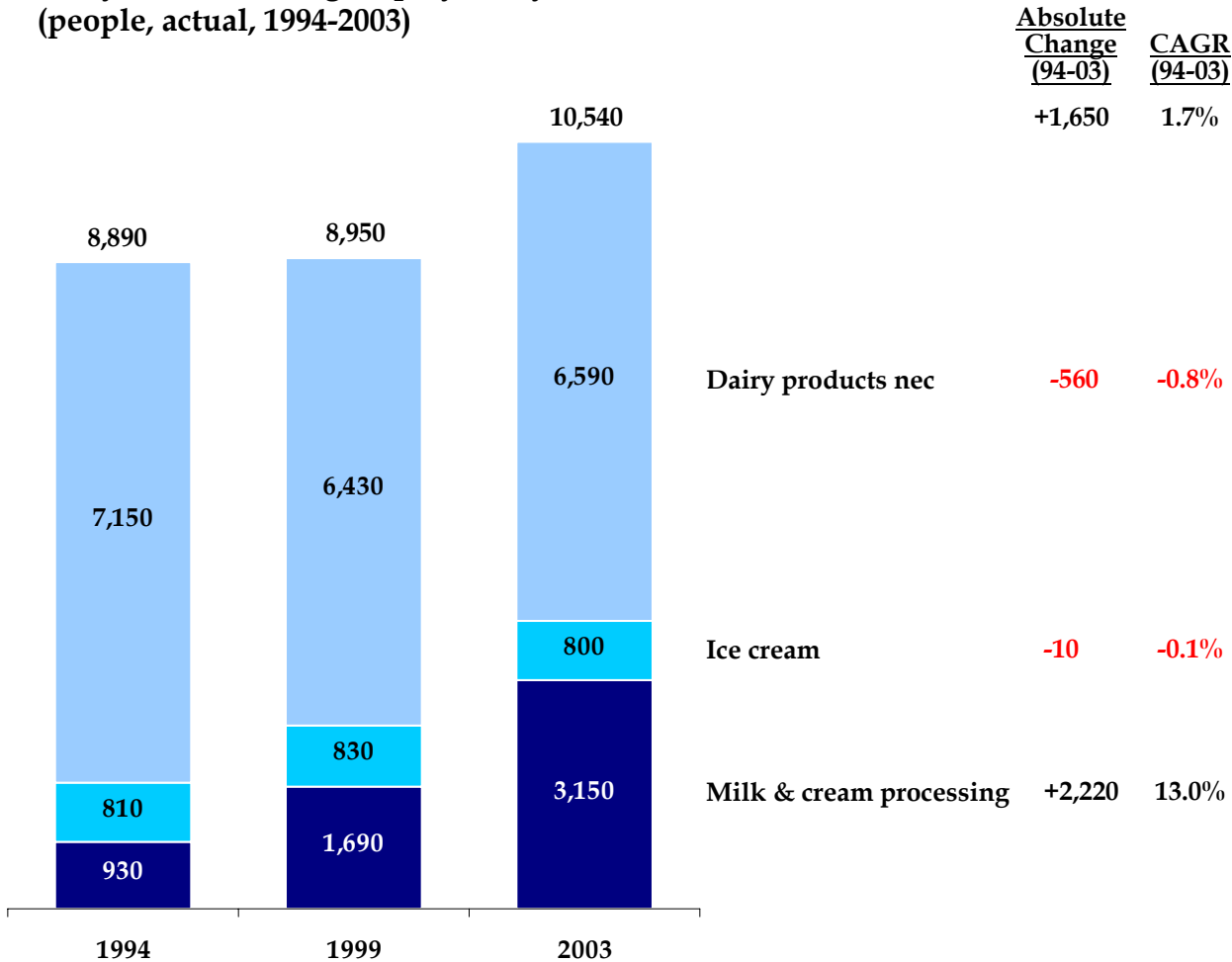
### Discussion Points

- What is happening in the Ice cream sector?

# DAIRY MANUFACTURING EMPLOYMENT

## Employment in dairy manufacturing continues to grow

Dairy manufacturing employees by sector (people, actual, 1994-2003)



### Discussion Points

- Growth of big players in fewer enterprises (see previous)

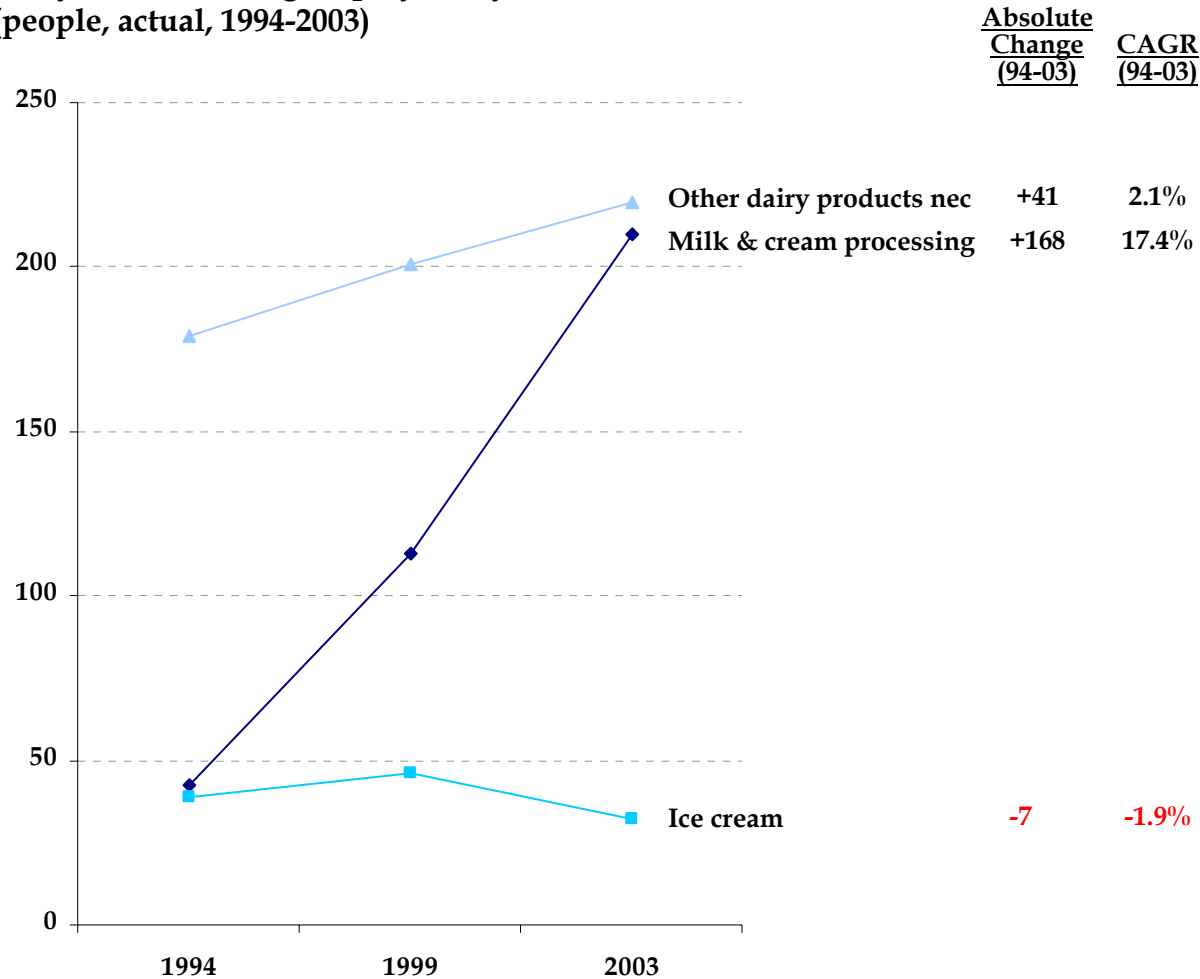
### Notes

- Includes working proprietors
- Total employees not FTE

# DAIRY MANUFACTURING EMPLOYMENT PER ENTERPRISE

Per enterprise employment is increasing in all sectors except ice cream

Dairy manufacturing employees by sector  
(people, actual, 1994-2003)



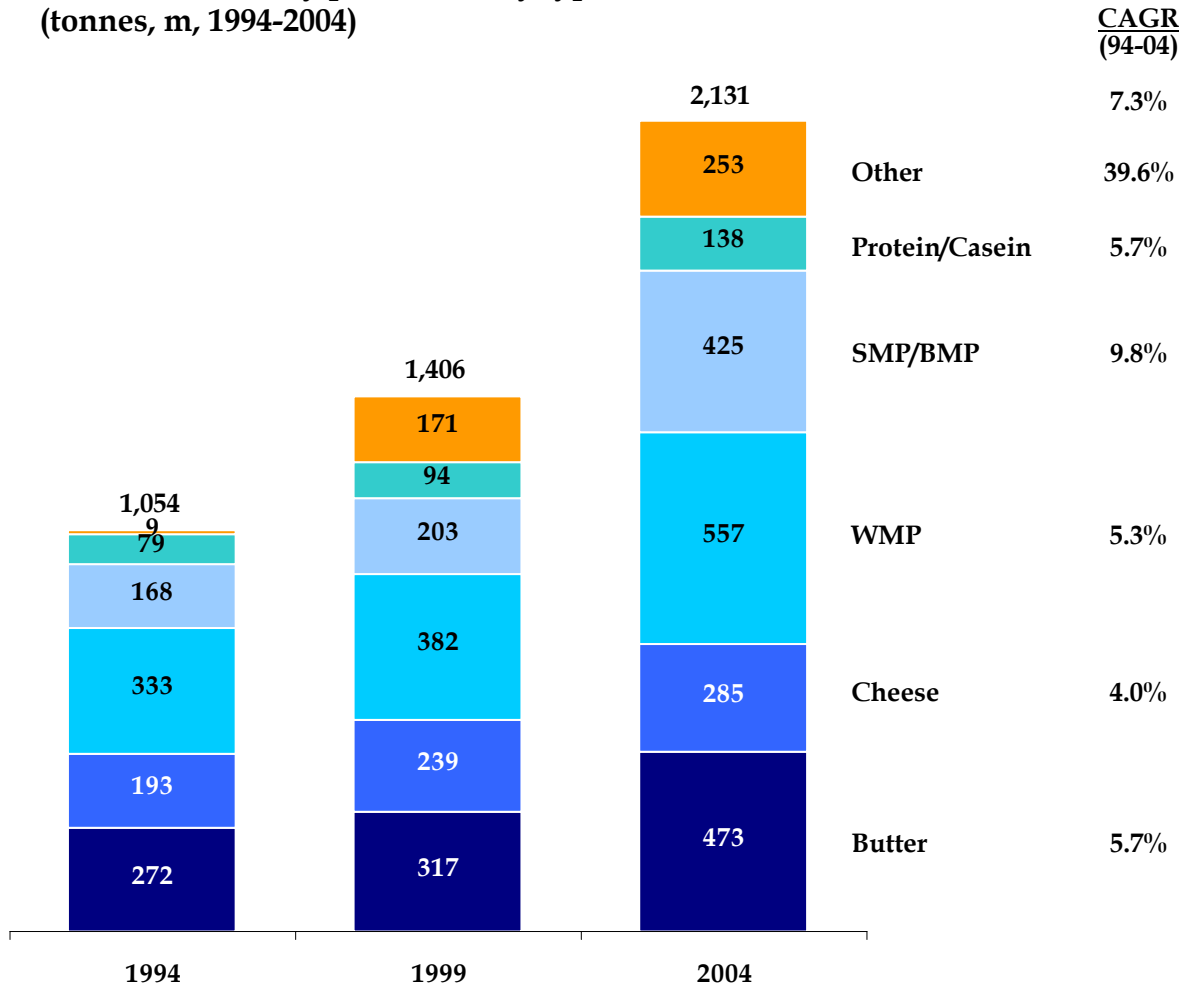
Notes

- Includes working proprietors
- Total employees not FTE

## DAIRY PRODUCTION BY TYPE

New Zealand's growing milk production is turned into a range of transport friendly dairy products with strong growth coming from SMP and "other"

New Zealand dairy production by type  
(tonnes, m, 1994-2004)



### Discussion Points

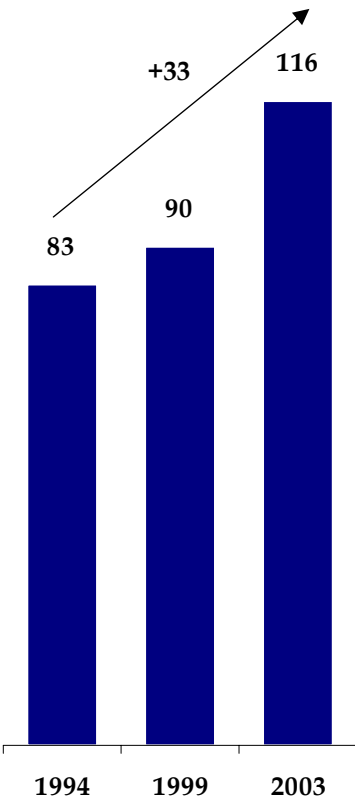
- What is other? How sustainable is its growth?
- Is the 1994 value for other correct? (Source: MAF SONZAF)

# DAIRY WHOLESALING

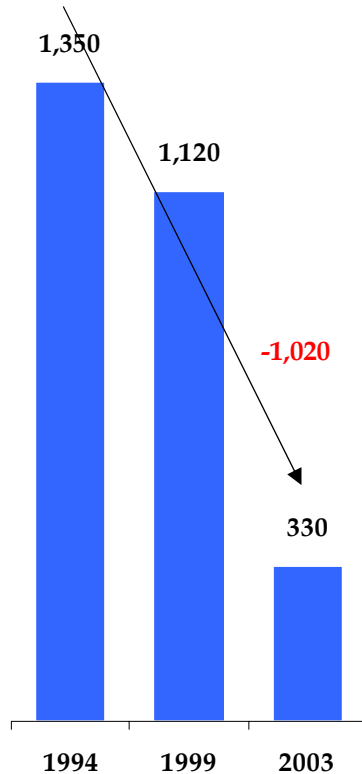
While the number of dairy wholesaling enterprises is up, the number of people employed is down strongly

Dairy wholesaling statistics  
(enterprises, employees, actual, 1994-2003)

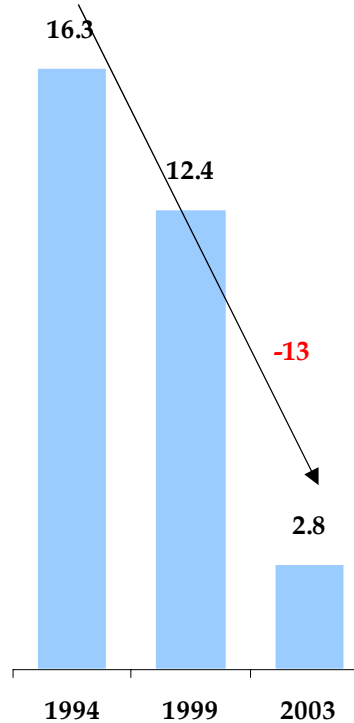
Enterprises



Employees



Employees/Enterprise



## Discussion Points

- Why? Reclassification of Mainland discussed earlier?

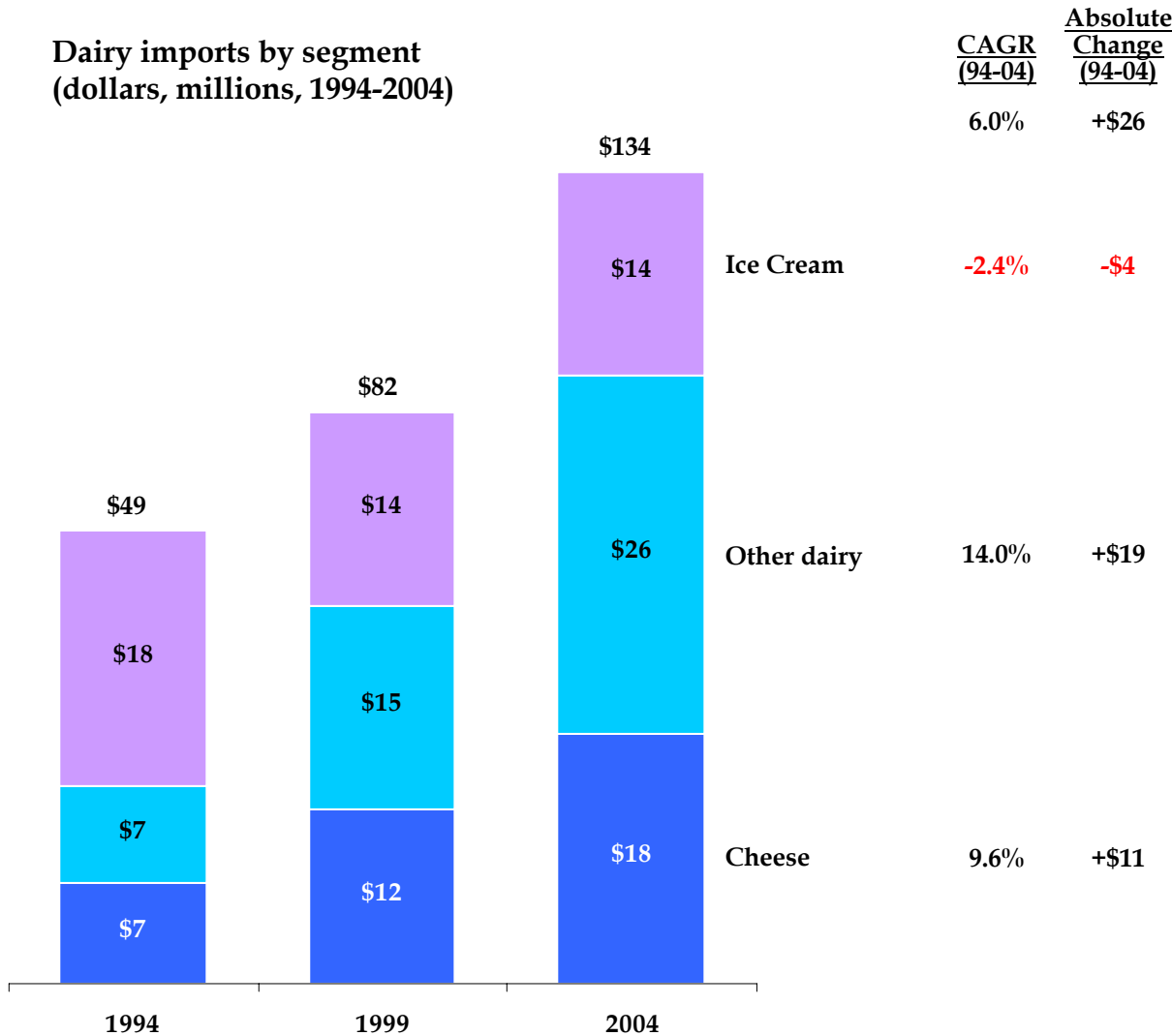
## Notes

- Wholesaler defines as more than 50% of turnover from products they do not manufacture

# NEW ZEALAND DAIRY IMPORTS BY SEGMENT

While dairy imports are growing, the total value of import is only 2% of the value of exports

Dairy imports by segment  
(dollars, millions, 1994-2004)



Segment	CAGR (94-04)	Absolute Change (94-04)
Ice Cream	-2.4%	-\$4
Other dairy	14.0%	+\$19
Cheese	9.6%	+\$11

### Discussion Points

- Why do we import ice cream?
- What is other dairy? Why are we importing it?

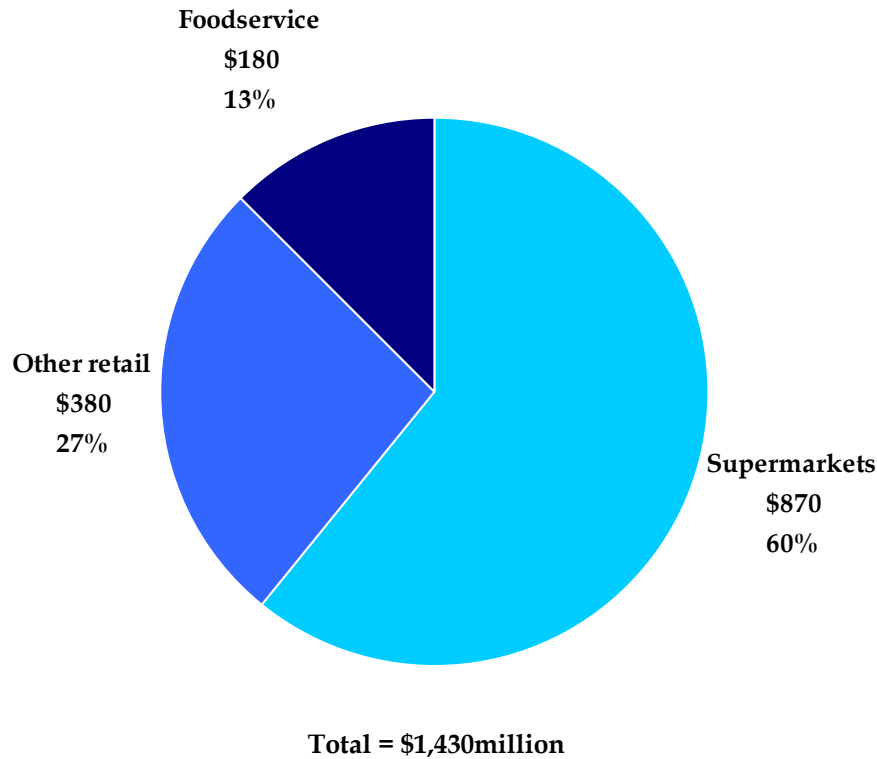
### Notes

- Classifications
  - Cheese (HS0406)
  - Other Dairy (remainder of HS04)
  - Ice cream (HS2105)

# DAIRY - DOMESTIC MARKET

The domestic dairy market has wholesale sales of \$1.4 billion

New Zealand domestic dairy products market by channel  
(dollars, millions, 2004)



## Discussion Points

- Opportunities for growth?

## Notes

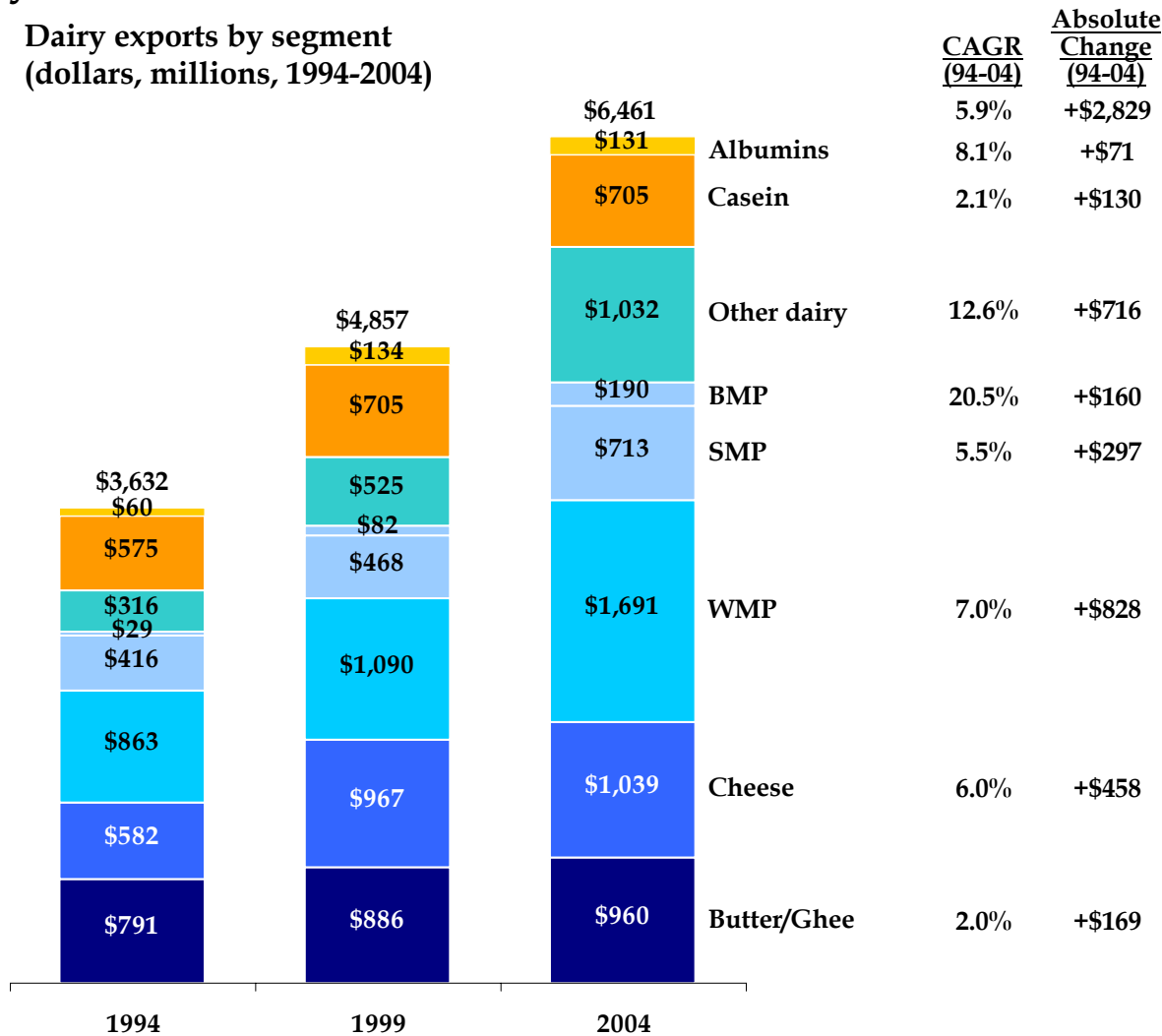
- Includes:
  - Milk & cream
  - Cheese
  - Yogurt & dairy foods
  - Cultured products
  - Ice Cream
  - Butter (excluding margarine)
  - Condensed milk
  - Various other dairy-based products
- Represents wholesale purchases of dairy products at cost to channel not retail sales to consumers
- Excludes ingredient purchases by manufacturers/others



# DAIRY EXPORTS BY SEGMENT

The dairy sector is the largest overall export sector, exports have almost doubled in the last 10 years

Dairy exports by segment  
(dollars, millions, 1994-2004)



### Discussion Points

- Significant growth coming from products other than Butter and Cheese
- Why isn't casein growing?

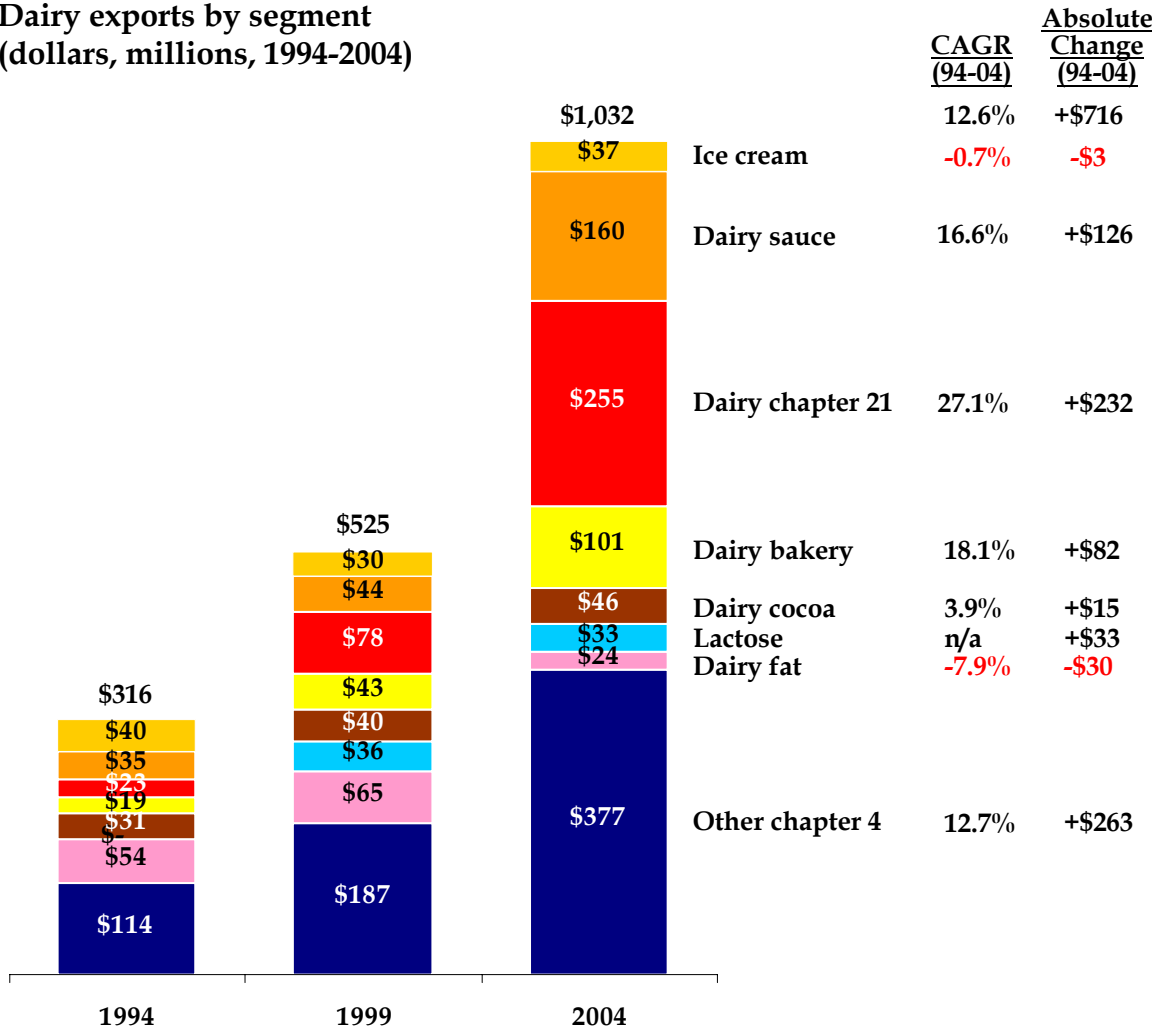
### Notes

- See next page for breakdown of other dairy

# OTHER DAIRY EXPORTS BY SEGMENT

New Zealand exports an increasing amount of dairy products under non-traditional dairy classifications

Dairy exports by segment  
(dollars, millions, 1994-2004)



Segment	CAGR (94-04)	Absolute Change (94-04)
Ice cream	-0.7%	-\$3
Dairy sauce	16.6%	+\$126
Dairy chapter 21	27.1%	+\$232
Dairy bakery	18.1%	+\$82
Dairy cocoa	3.9%	+\$15
Lactose	n/a	+\$33
Dairy fat	-7.9%	-\$30
Other chapter 4	12.7%	+\$263

## Discussion Points

- Growing role of international trade barriers in structure of dairy production

## Notes

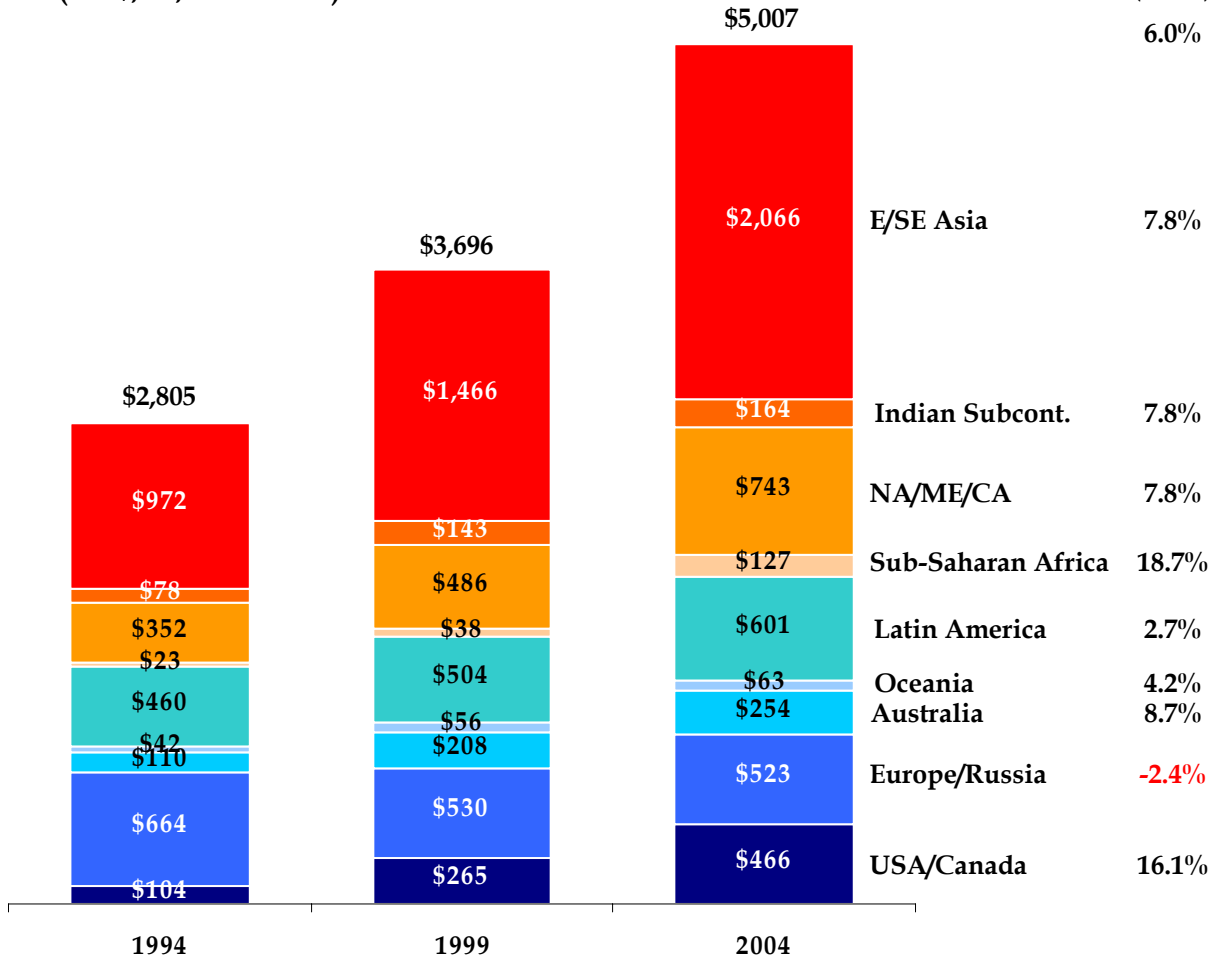
- Classifications:
  - Other chapter 04 (HS04 less cheese, butter, WMP/SMP/BMP, eggs and honey)
  - Ice cream (HS2105)
  - Dairy fat (HS1516.10/1517.10)
  - Lactose (HS1702.11/1702.19)
  - Dairy cocoa (HS1805)
  - Dairy bakery (HS1901.90)
  - Dairy chapter 21 (HS2106.90)
  - Dairy Sauce (HS2103.90)
  - Excludes milk-based animal food

# NEW ZEALAND TOTAL DAIRY EXPORT VALUE BY DESTINATION

## The New Zealand dairy industry is achieving good export sales growth

New Zealand dairy export value by destination  
(NZ\$, m, 1994-2004)

CAGR  
(94-04)



### Discussion Points

- What drove the +\$500m sales increase to Asia in the last 5 years? Can this growth continue?
- How at risk are exports to Latin America given that regions growing production?
- Will exports value to Europe continue to decline at the same rate over the next decade?

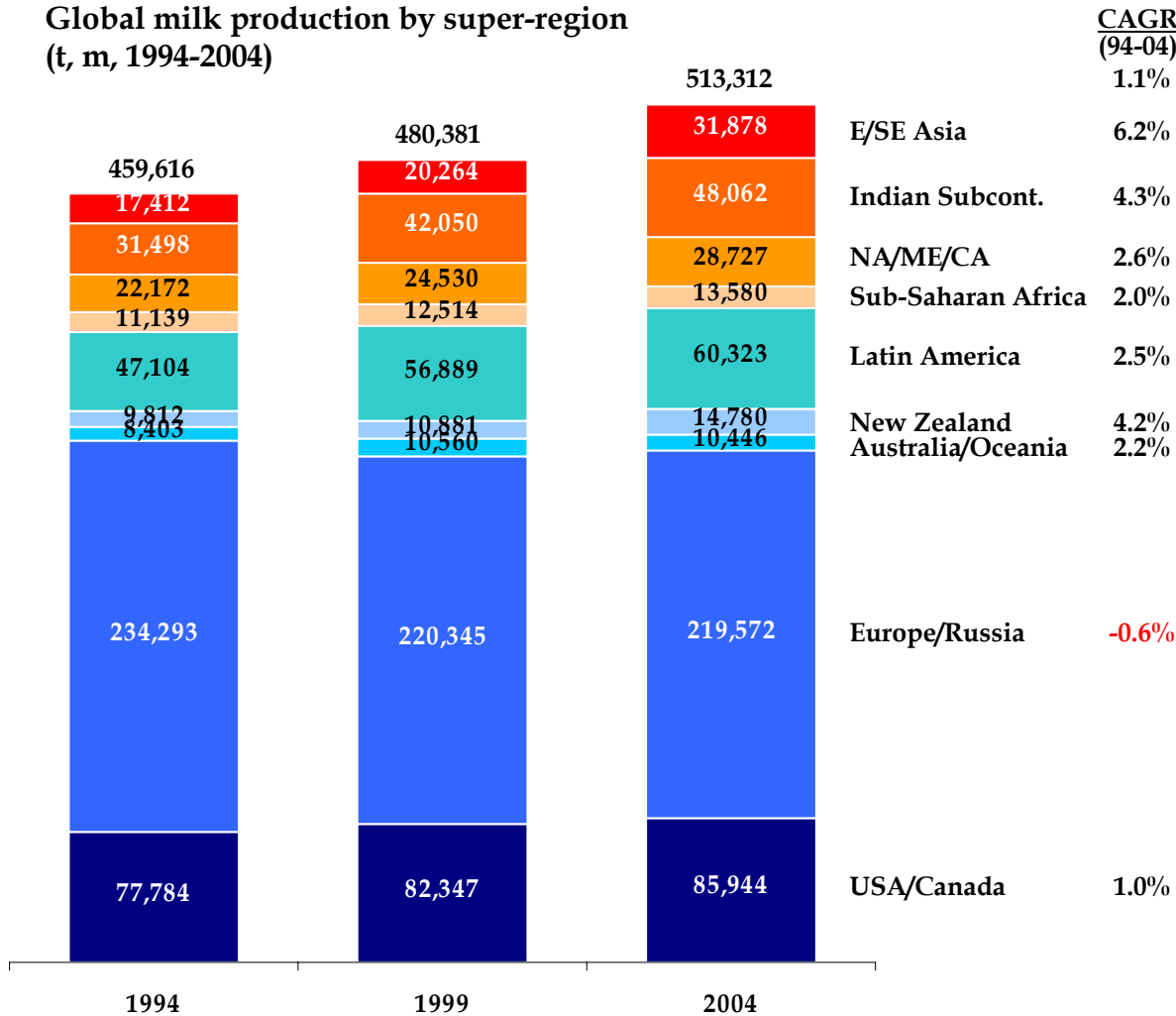
### Notes

- Excludes non-HS04 dairy products including casein
- Uses HS04 (Dairy) to simplify analysis which includes a small amount of eggs/honey (\$34m in 2004)

# GLOBAL MILK PRODUCTION VOLUME BY REGION

On a global scale, New Zealand is a relatively minor milk producer; India and Asia are showing stronger growth

Global milk production by super-region  
(t, m, 1994-2004)



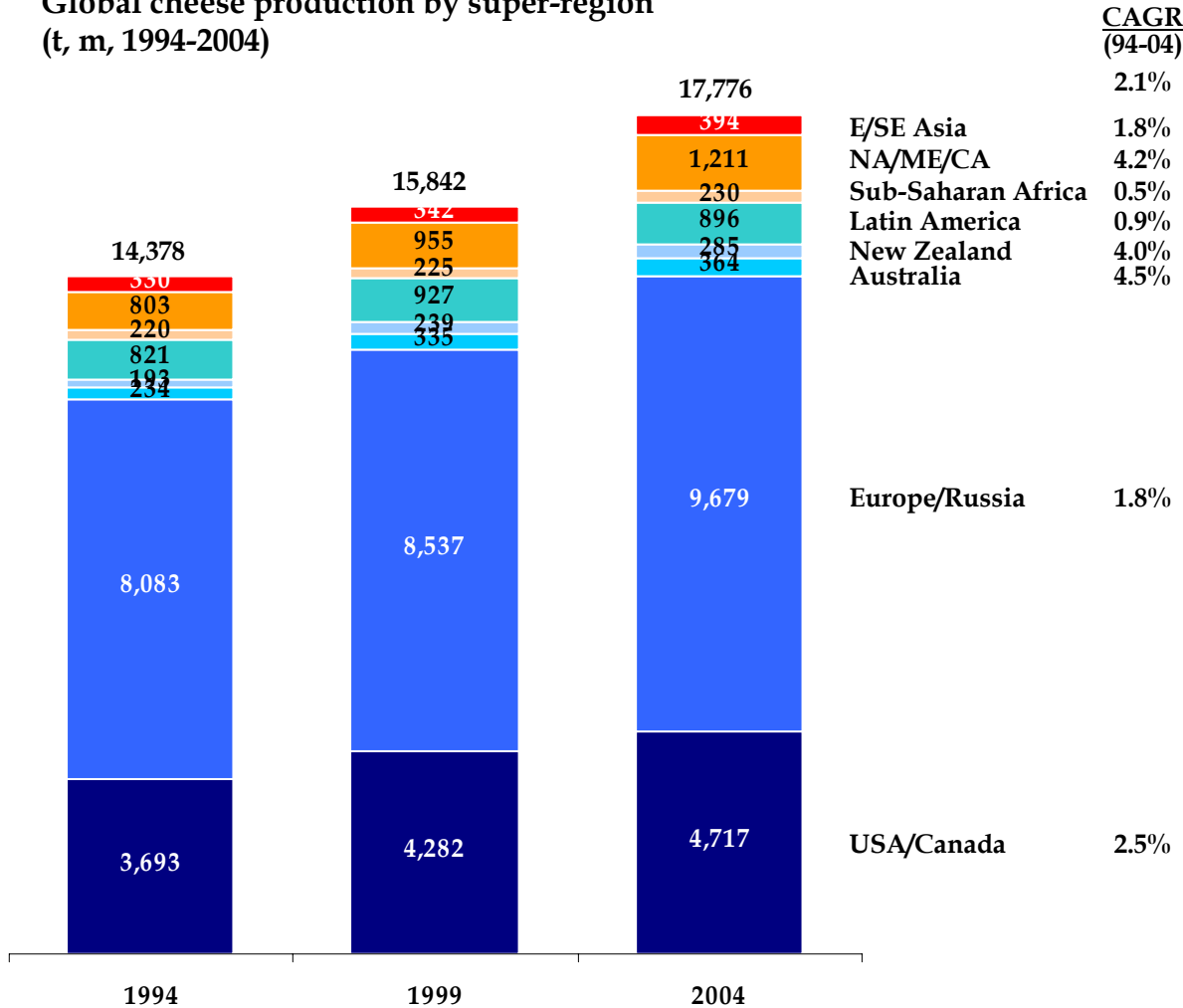
## Discussion Points

- Why is milk production falling in Europe? How quickly can this change?
- What is the capability and cost structure of Eastern Europe/Russia? of India?
- In the past 5 years E/SE Asia has added the equivalent of New Zealand's total production; Can this growth continue?

# CHEESE PRODUCTION VOLUME BY REGION

Global cheese production is centered in Europe and the USA/Canada

Global cheese production by super-region  
(t, m, 1994-2004)



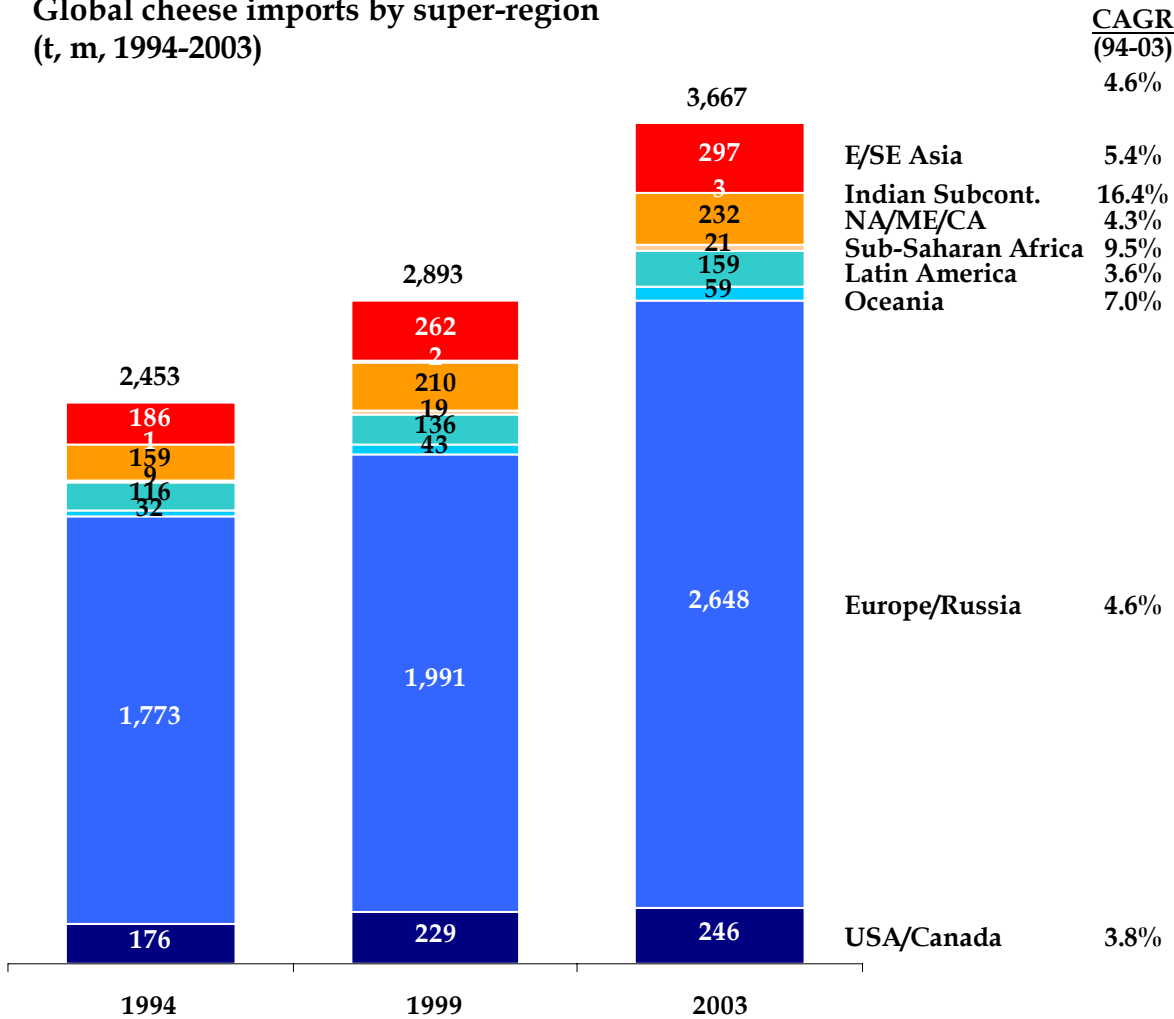
## Discussion Points

- Why does Australia produce more cheese than New Zealand?
- Why is cheese production growing faster in Australia than in New Zealand?

# CHEESE IMPORT VOLUME BY REGION

Europe is the leading importer of cheese, primarily from other European countries

Global cheese imports by super-region  
(t, m, 1994-2003)



## Discussion Points

- Why does Europe import so much cheese?

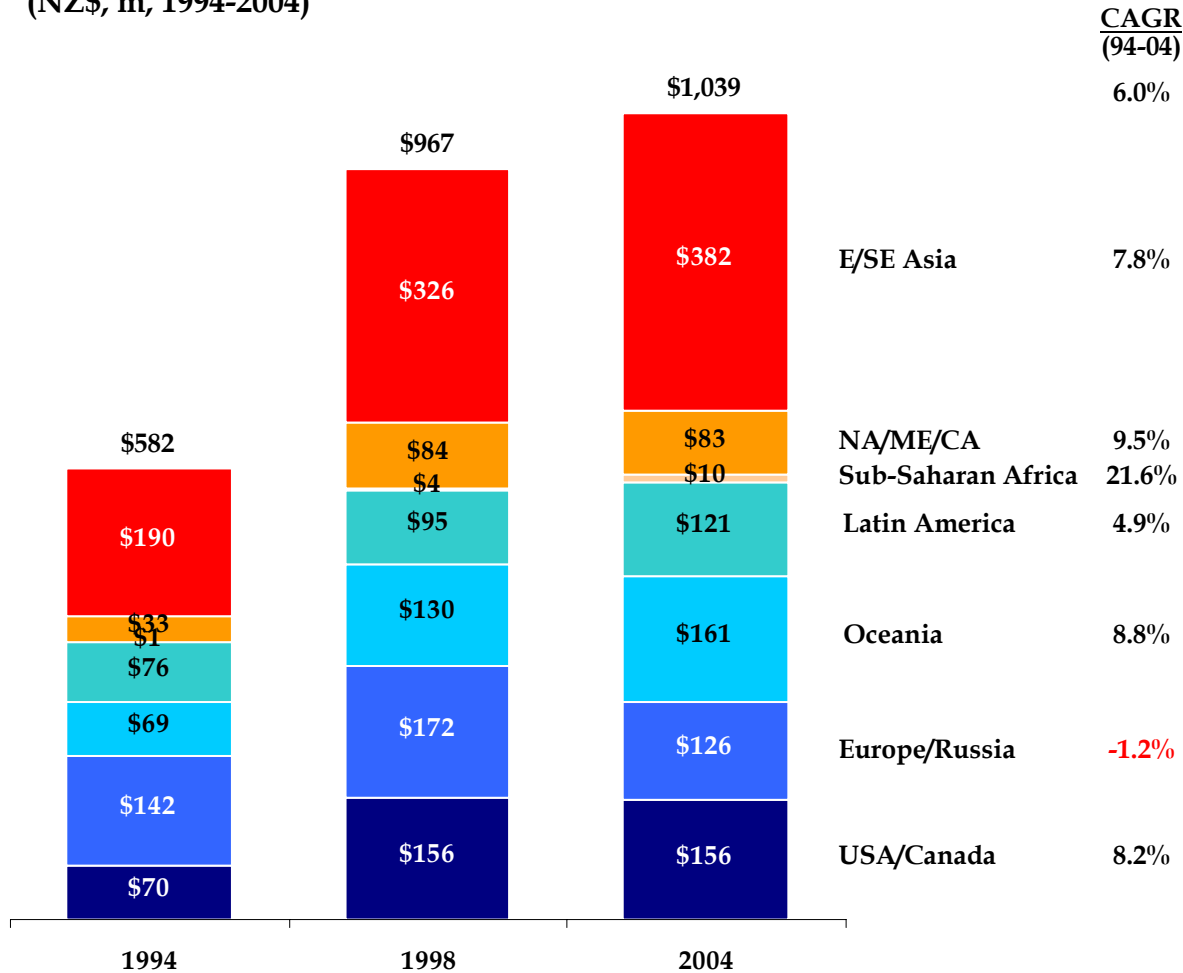
## Notes

- Includes inter-regional trade (e.g. France to Germany) inseparable at source

# NEW ZEALAND CHEESE EXPORT VALUE BY DESTINATION

The growth of New Zealand cheese export value has slowed recently

New Zealand cheese export value by destination  
(NZ\$, m, 1994-2004)



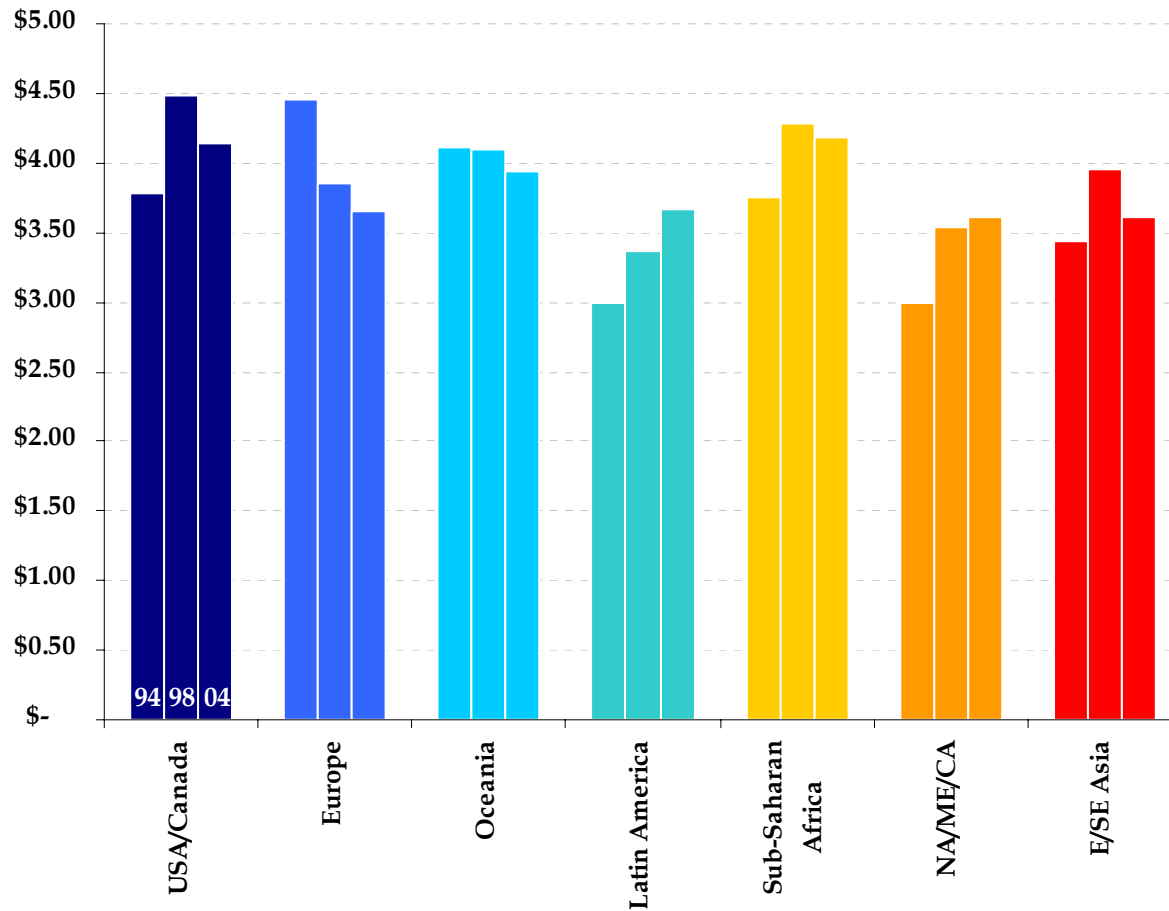
## Discussion Points

- What drove the +\$385m sales increase from 1994-1998? Why did it slow?
- Given Asia now represents 37% of NZ cheese exports, how willing are Asians to eat more cheese?
- Will exports value to Europe continue to decline at the same rate over the next decade?
- How much more cheese growth is available in Australia/Oceania?

# NEW ZEALAND CHEESE EXPORT VALUE PER KILO BY DESTINATION

There is no clear trend in New Zealand cheese export pricing

New Zealand cheese export value per kg by destination  
(NZ\$, 1994-2004)



## Discussion Points

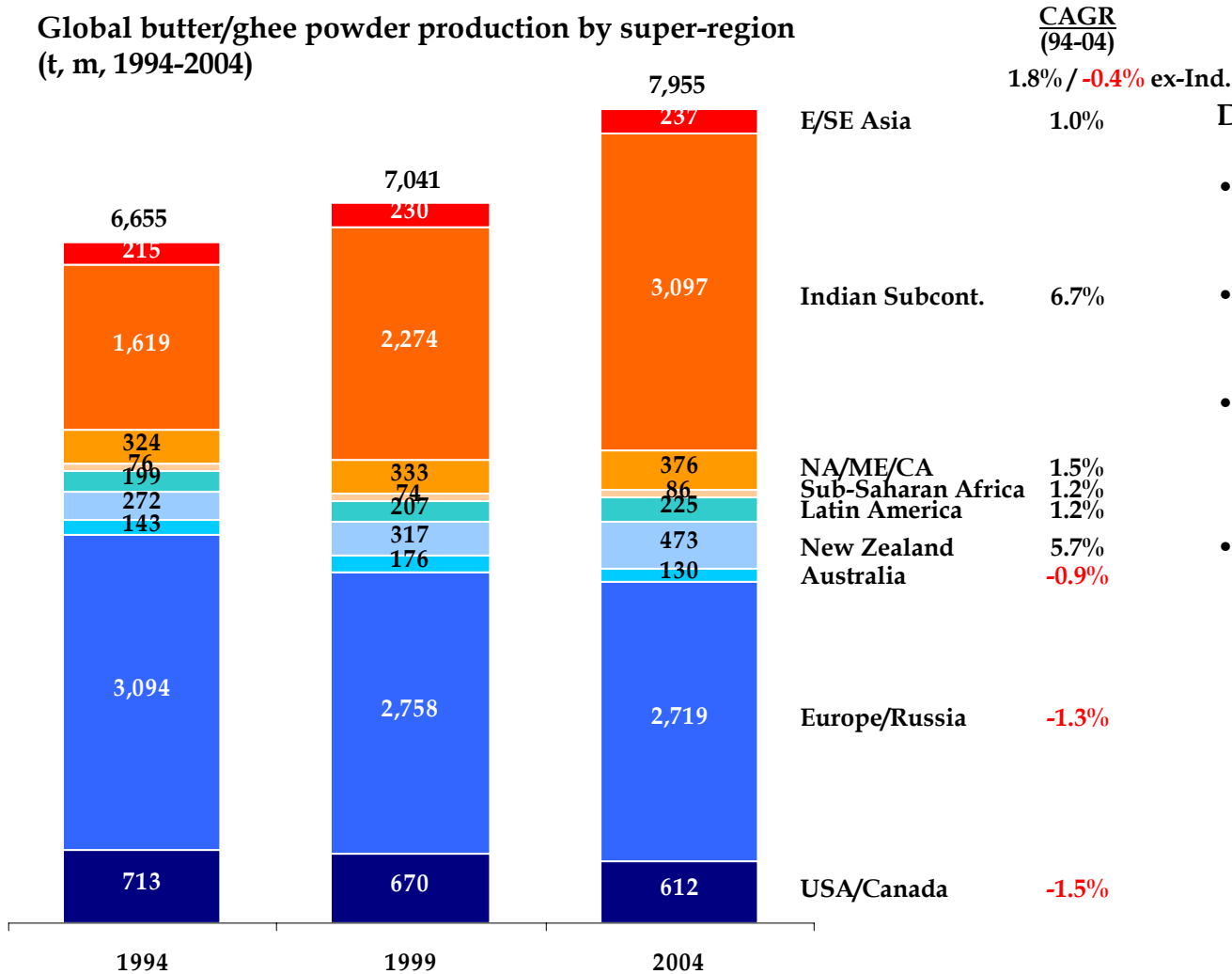
- Why is value per kg falling to Europe but rising to South America?
- Why haven't prices to Australia /Oceania fallen as fast as those to Europe?



# BUTTER/GHEE PRODUCTION VOLUME BY REGION

Global butter/ghee production is going nowhere or backwards except in India and New Zealand

Global butter/ghee powder production by super-region  
(t, m, 1994-2004)



CAGR  
(94-04)

1.8% / -0.4% ex-Ind.

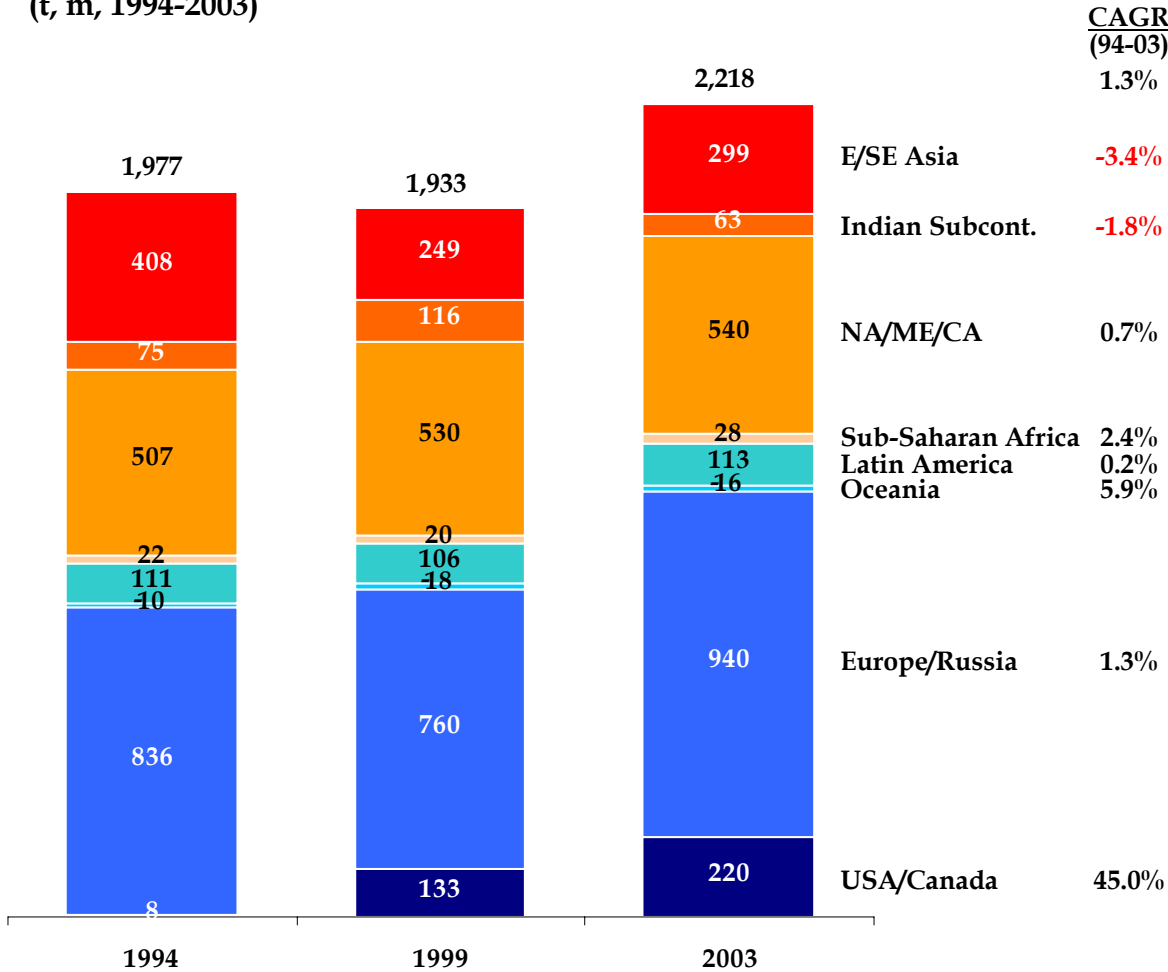
### Discussion Points

- What is driving the growth of butter/ghee production in India?
- What capability does India have to export? In 10 years?
- Why is New Zealand producing more butter while the rest of the Western world is producing less?
- Why is butter production declining in Australia?

# BUTTER/GHEE IMPORT VOLUME BY REGION

Overall, global butter/ghee imports are growing slowly

Global butter/ghee imports by super-region  
(t, m, 1994-2003)



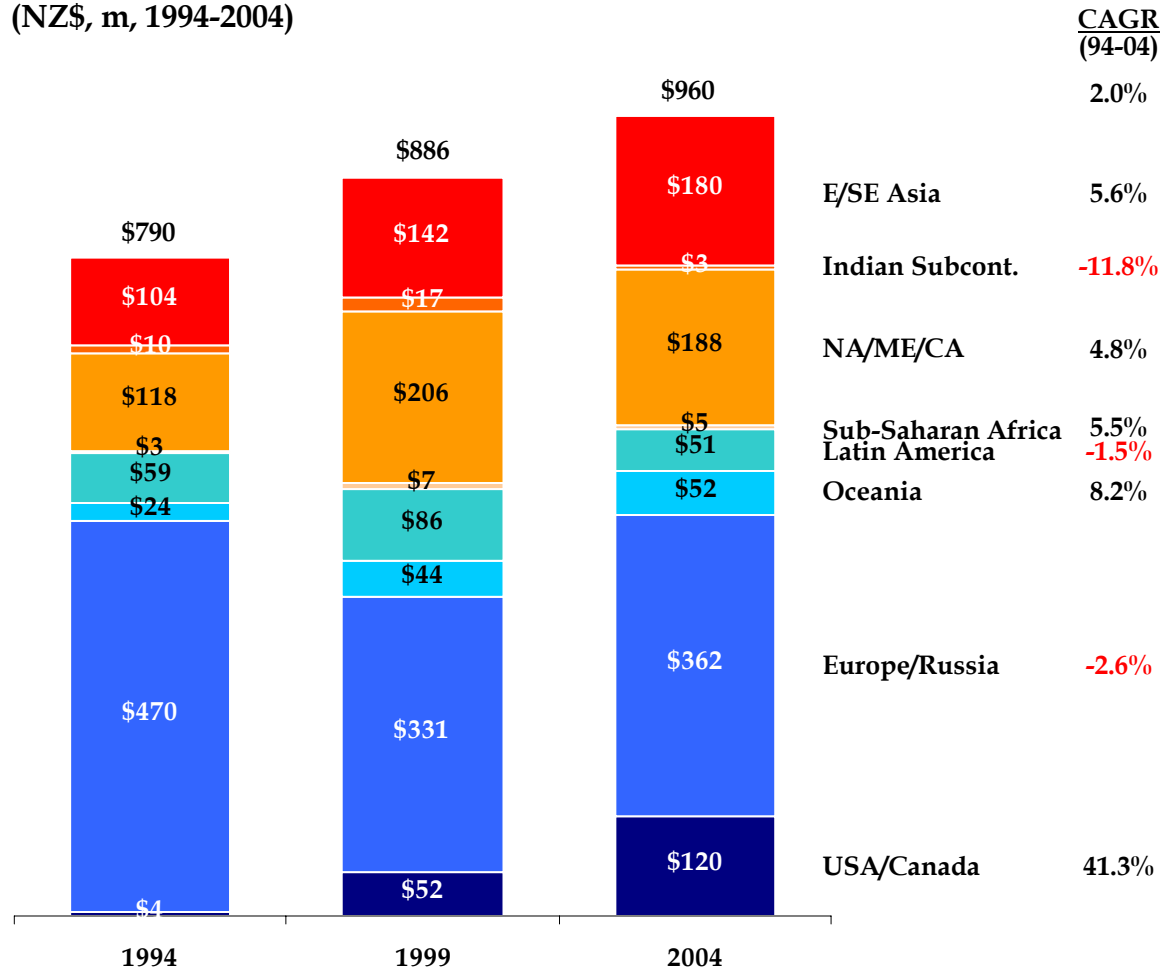
## Discussion Points

- What potential is there for Arabic or Asian consumers to substitute other oils/fats for ghee?

# NEW ZEALAND BUTTER/GHEE EXPORT VALUE BY DESTINATION

Arabic countries, the US/Canada and E/SE Asia are importing more New Zealand butter/ghee, while overall Europe is importing less

New Zealand butter/ghee export value by destination (NZ\$, m, 1994-2004)



Destination	CAGR (94-04)
USA/Canada	41.3%
E/SE Asia	5.6%
Indian Subcont.	-11.8%
NA/ME/CA	4.8%
Sub-Saharan Africa	5.5%
Latin America	-1.5%
Oceania	8.2%
Europe/Russia	-2.6%

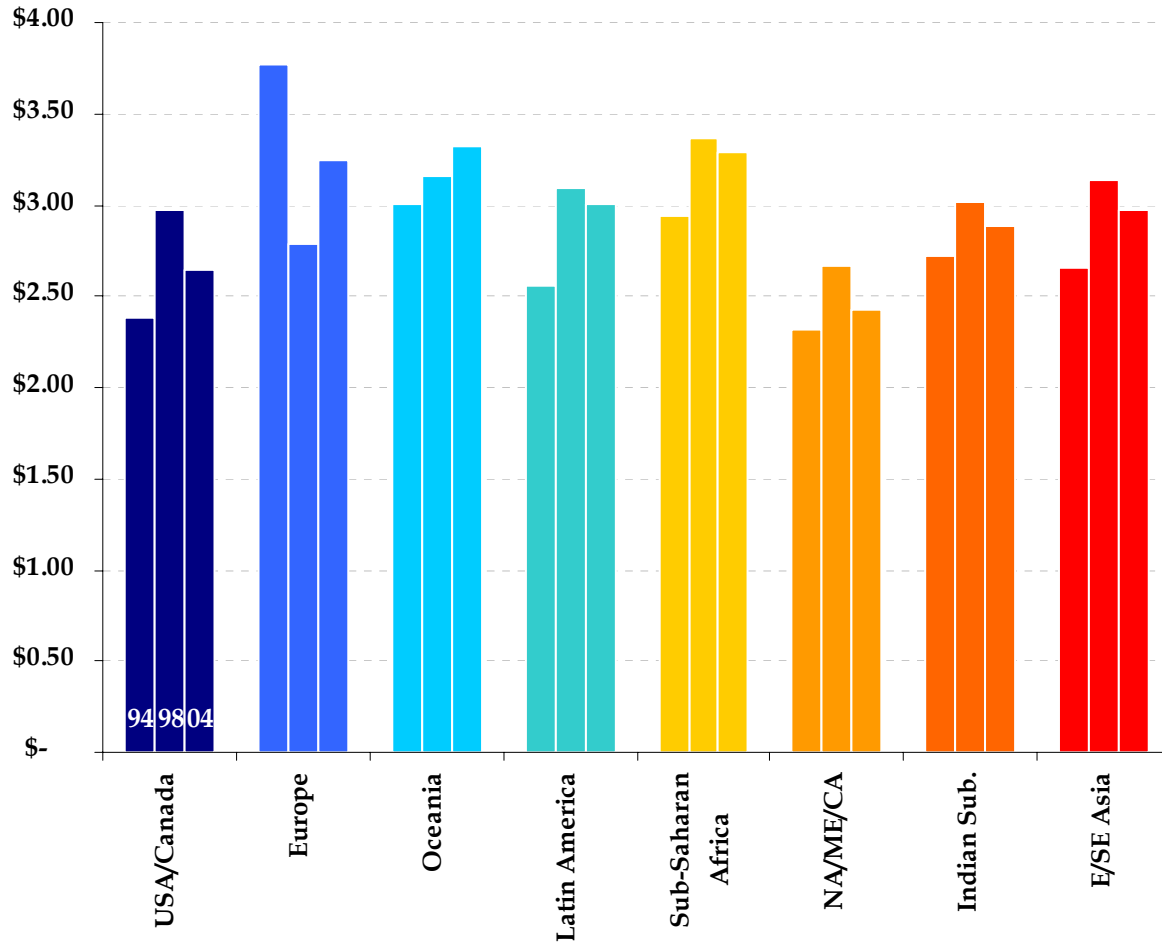
## Discussion Points

- What is the ultimate potential of the US/Canada market?

# NEW ZEALAND BUTTER/GHEE EXPORT VALUE PER KILO BY DESTINATION

## Export butter value per kilo are up over the past decade

New Zealand butter/ghee export value per kg by destination (NZ\$, 1994-2004)



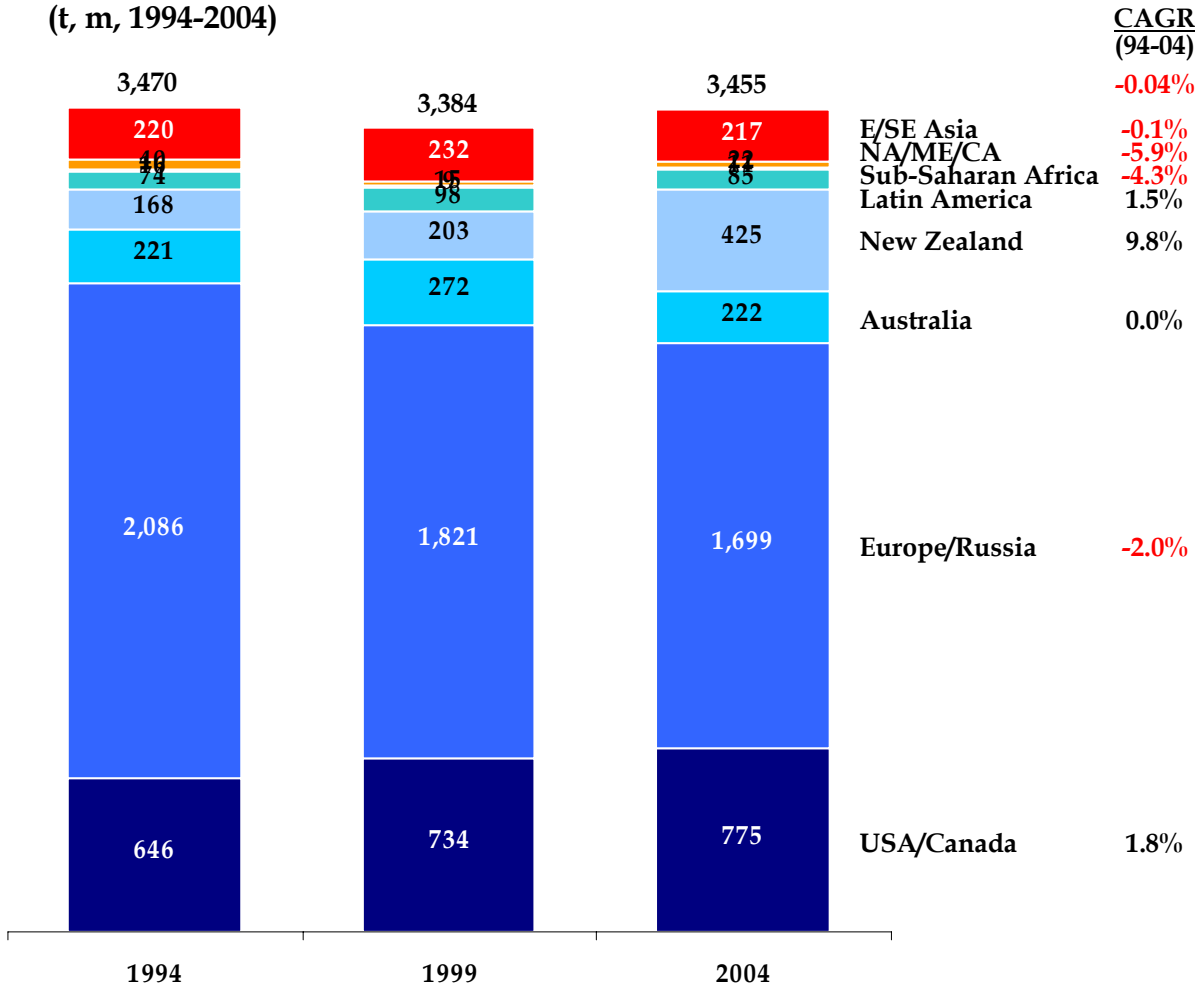
### Discussion Points

- With falling consumption and low global production growth, what is pushing up prices?

## SMP PRODUCTION VOLUME BY REGION

New Zealand is dramatically increasing its SMP production in a declining market, effectively taking share from almost every other region

Global skim milk powder production by super-region  
(t, m, 1994-2004)



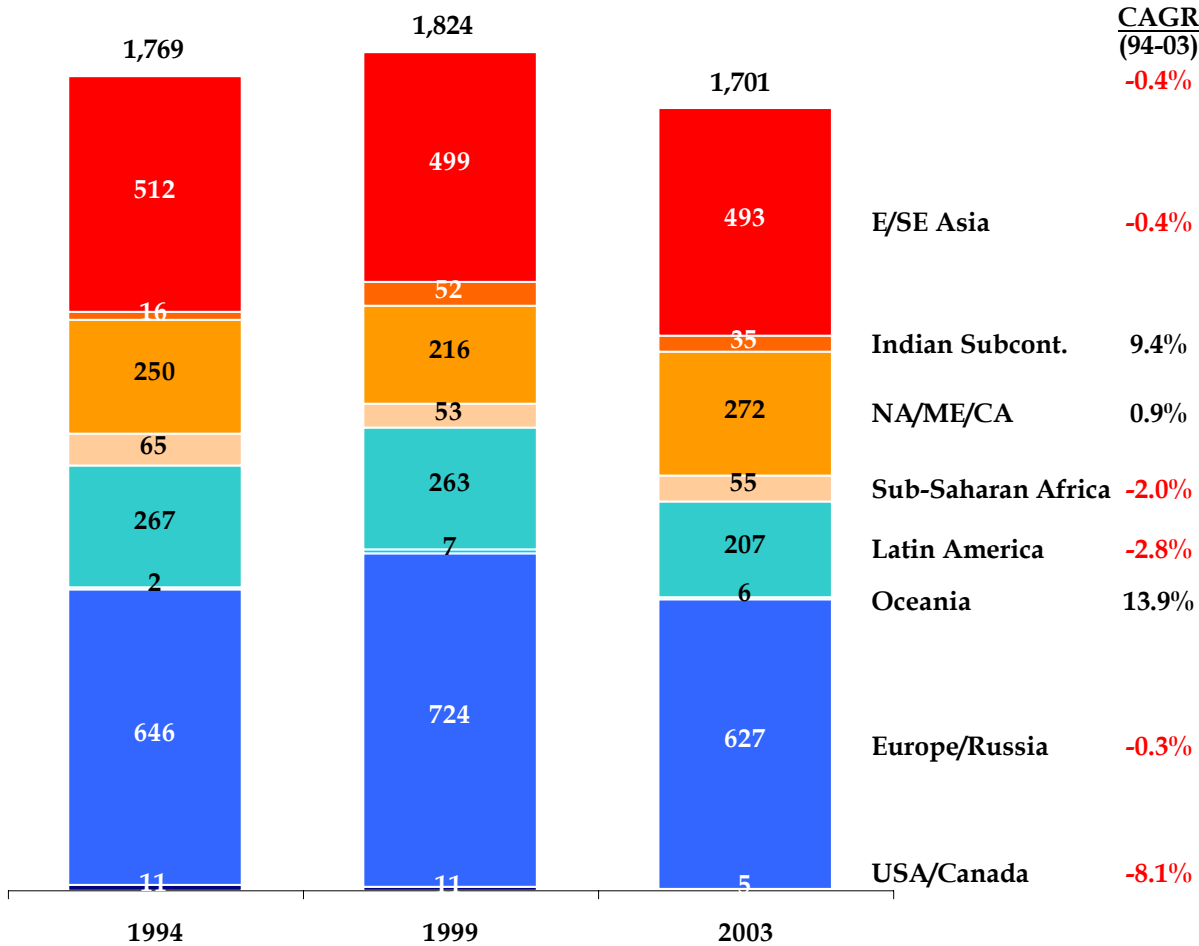
### Discussion Points

- How is New Zealand growing in a market showing no growth? How long will this growth last?
- Why does the US produce SMP not WMP?
- What capability does Latin America have to switch from WMP to SMP?

# SMP IMPORT VOLUME BY REGION

Global SMP imports - from all countries - are declining

Global skim milk powder imports by super-region (t, m, 1994-2003)



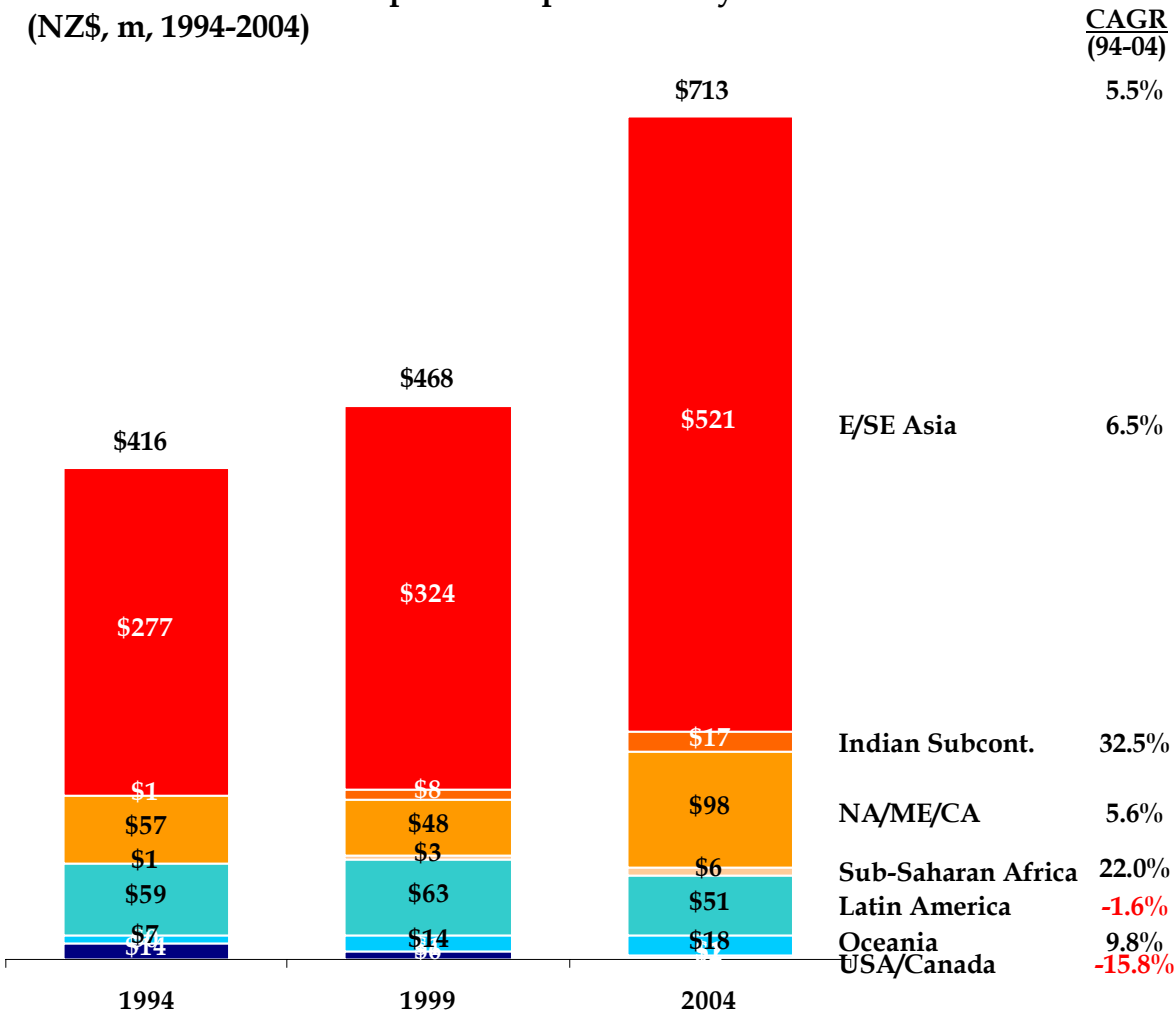
## Discussion Points

- What is driving the growth of imports in Oceania and the Indian Subcontinent?

# NEW ZEALAND SMP EXPORT VALUE BY DESTINATION

New Zealand's SMP export sales are growing, primarily to Asia and the Middle East

New Zealand skim milk powder export value by destination  
(NZ\$, m, 1994-2004)



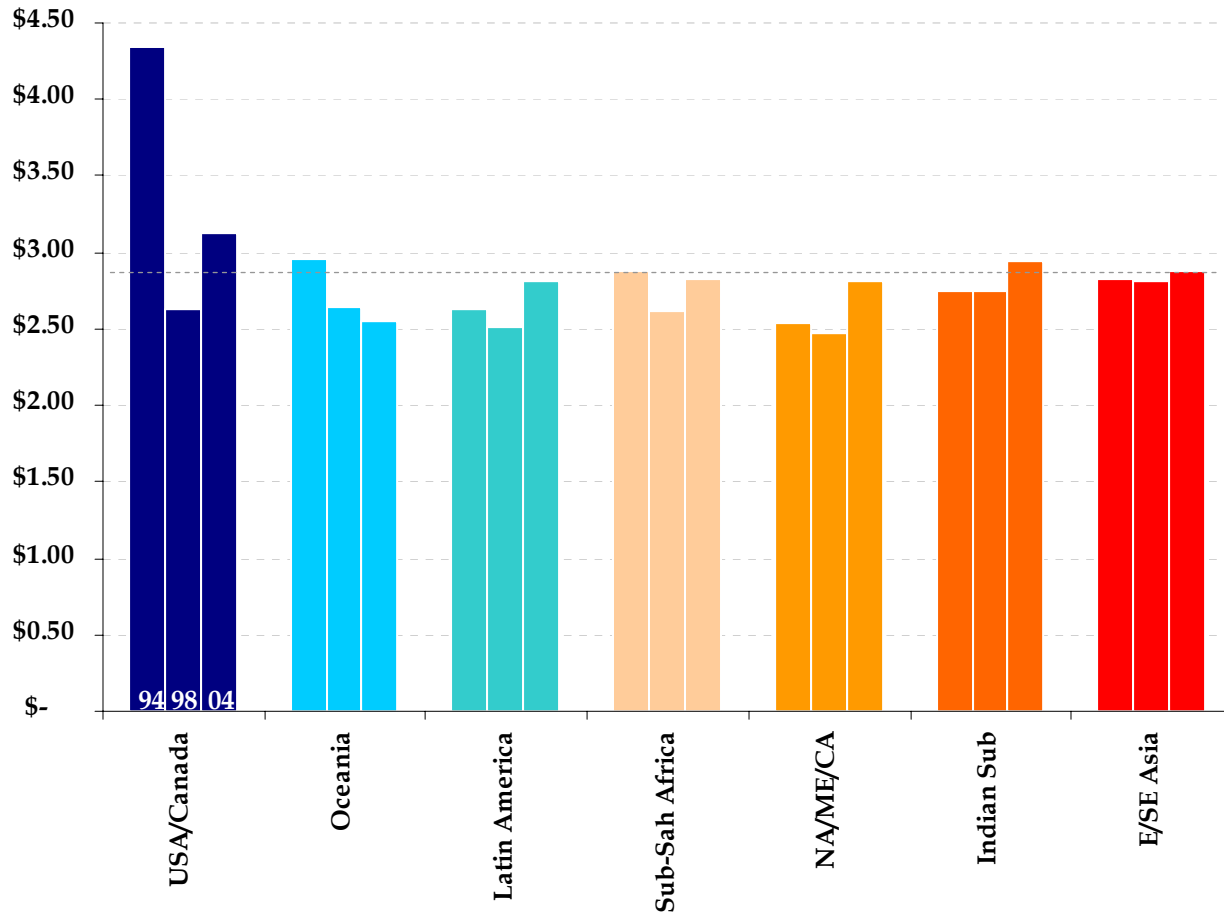
## Discussion Points

- What is the ultimate potential of the Asian market?

# NEW ZEALAND SMP EXPORT VALUE PER KILO BY DESTINATION

New Zealand's export value per kilo for SMP falls in a narrow band except for export to Australia/Oceania

New Zealand SMP export value per kg by destination  
(NZ\$, 1994-2004)



Discussion Points

- Why is value to Oceania falling?

Notes

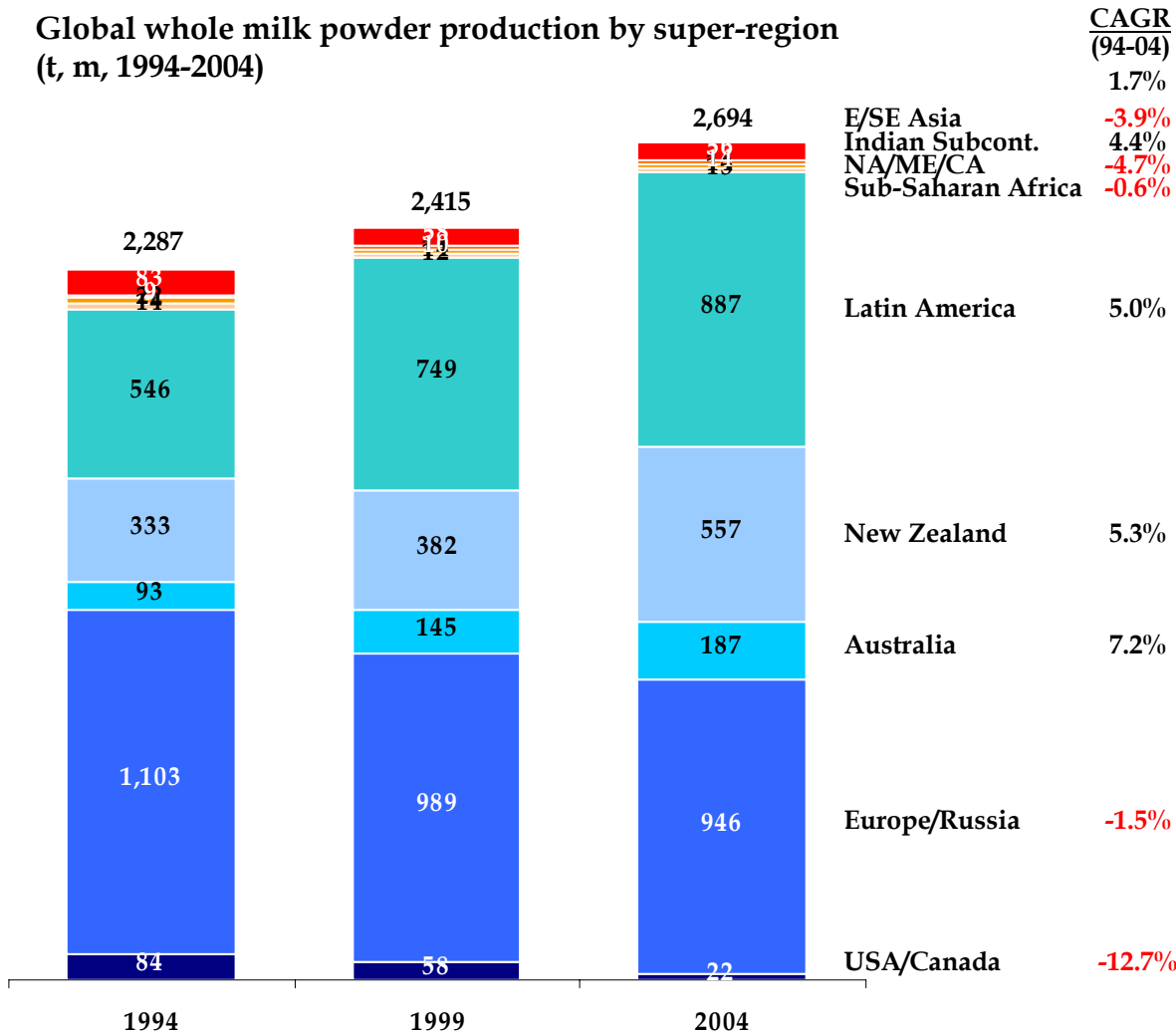
- HS040210



# WMP PRODUCTION VOLUME BY REGION

Latin America, Australia, and New Zealand are increasing WMP production at the expense of other producers

Global whole milk powder production by super-region  
(t, m, 1994-2004)



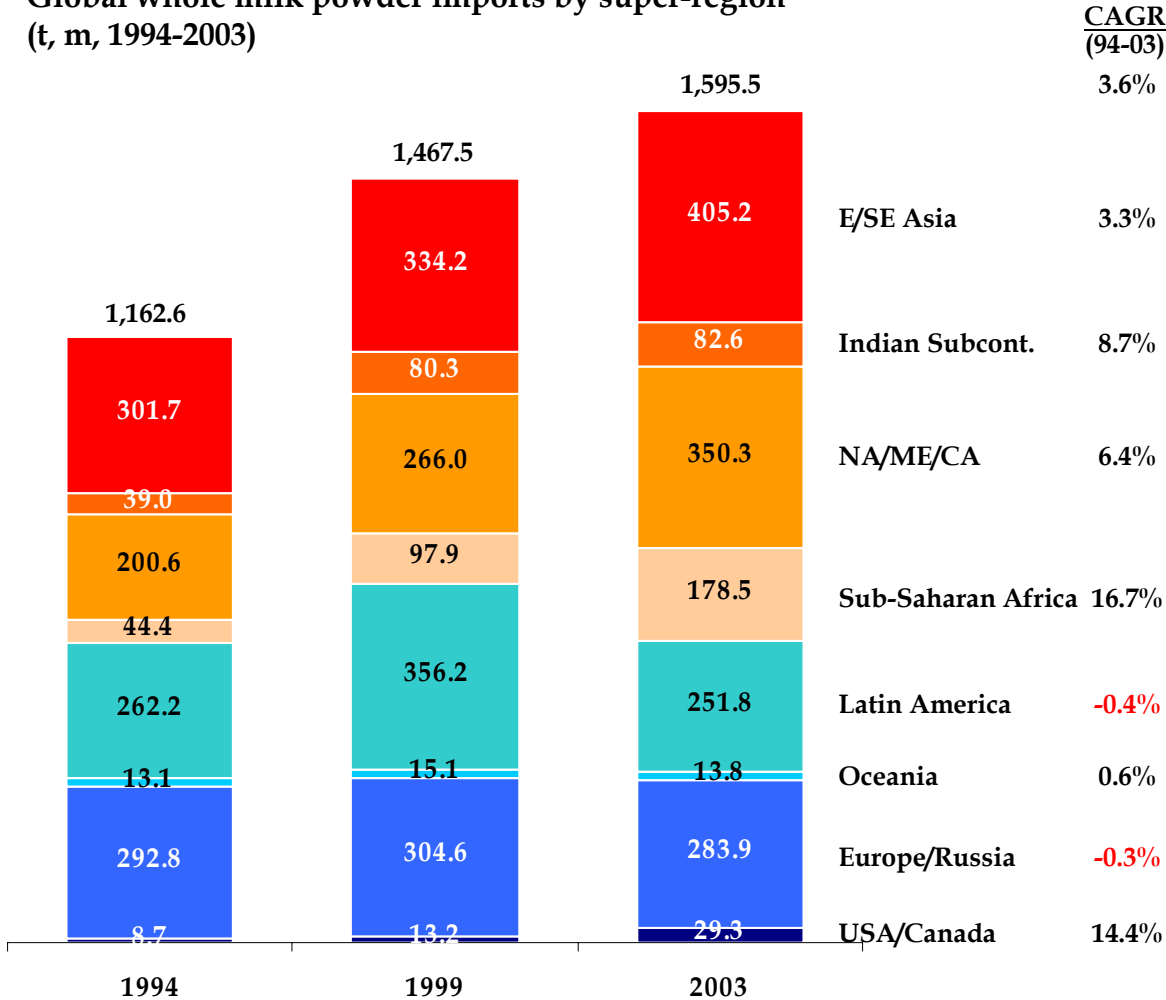
## Discussion Points

- Why is Australian production growing faster than New Zealand?
- What is the ultimate capacity of South America?
- What is the capability of Eastern Europe/Russia to produce WMP?
- How much is Fonterra involved in Latin American production?
- Why is Latin America producing WMP not SMP?

# WMP IMPORT VOLUME BY REGION

Global WMP import volumes - from all countries - are growing at 3.6% per year

Global whole milk powder imports by super-region  
(t, m, 1994-2003)



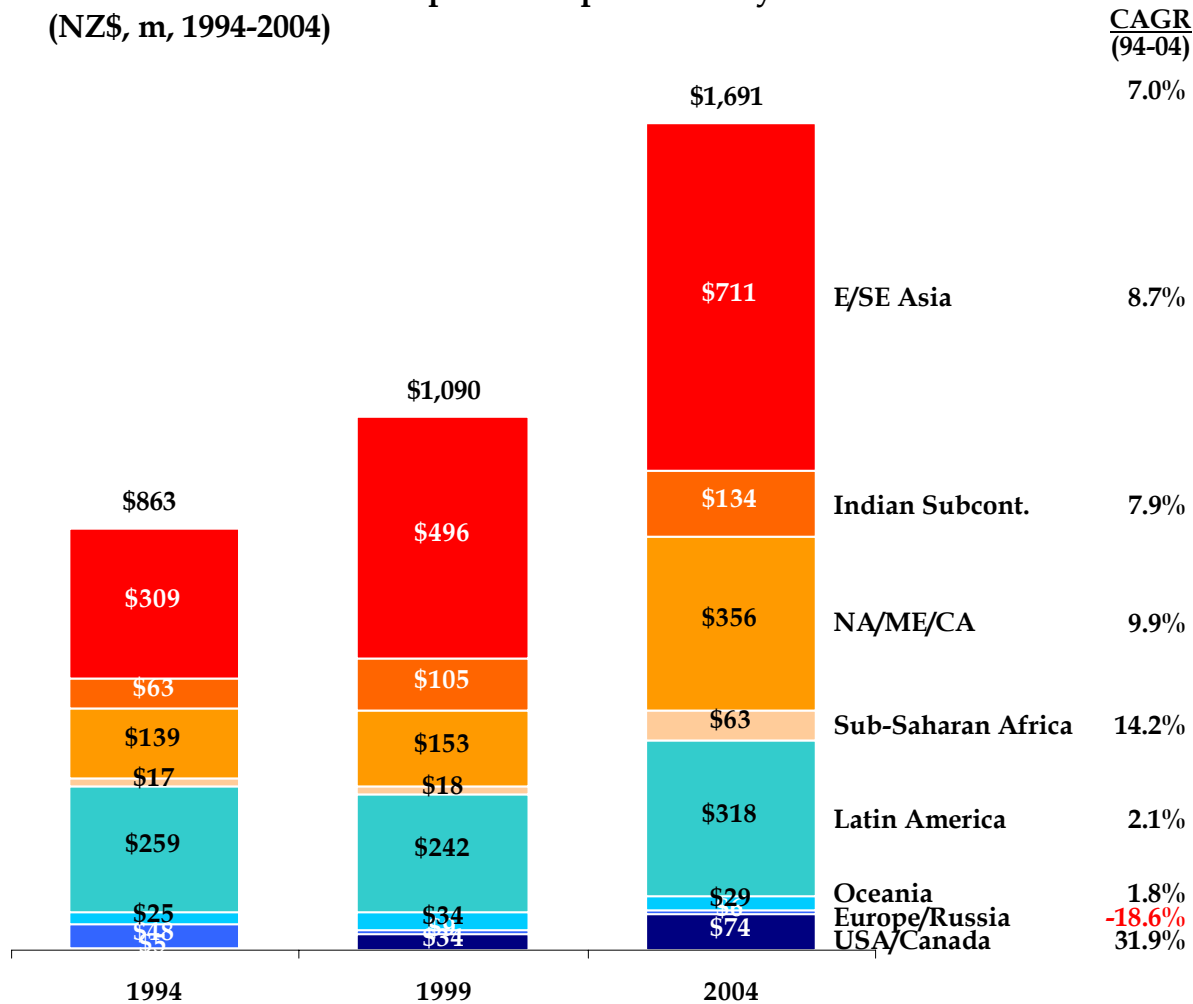
## Discussion Points

- What is driving the growth of imports by Sub-Saharan Africa and the US?
- Why did South American imports decline in the past 5 years?

# NEW ZEALAND WMP EXPORT VALUE BY DESTINATION

New Zealand is experiencing good WMP sales growth, primarily to Asia and the Arabic world

New Zealand whole milk powder export value by destination  
(NZ\$, m, 1994-2004)



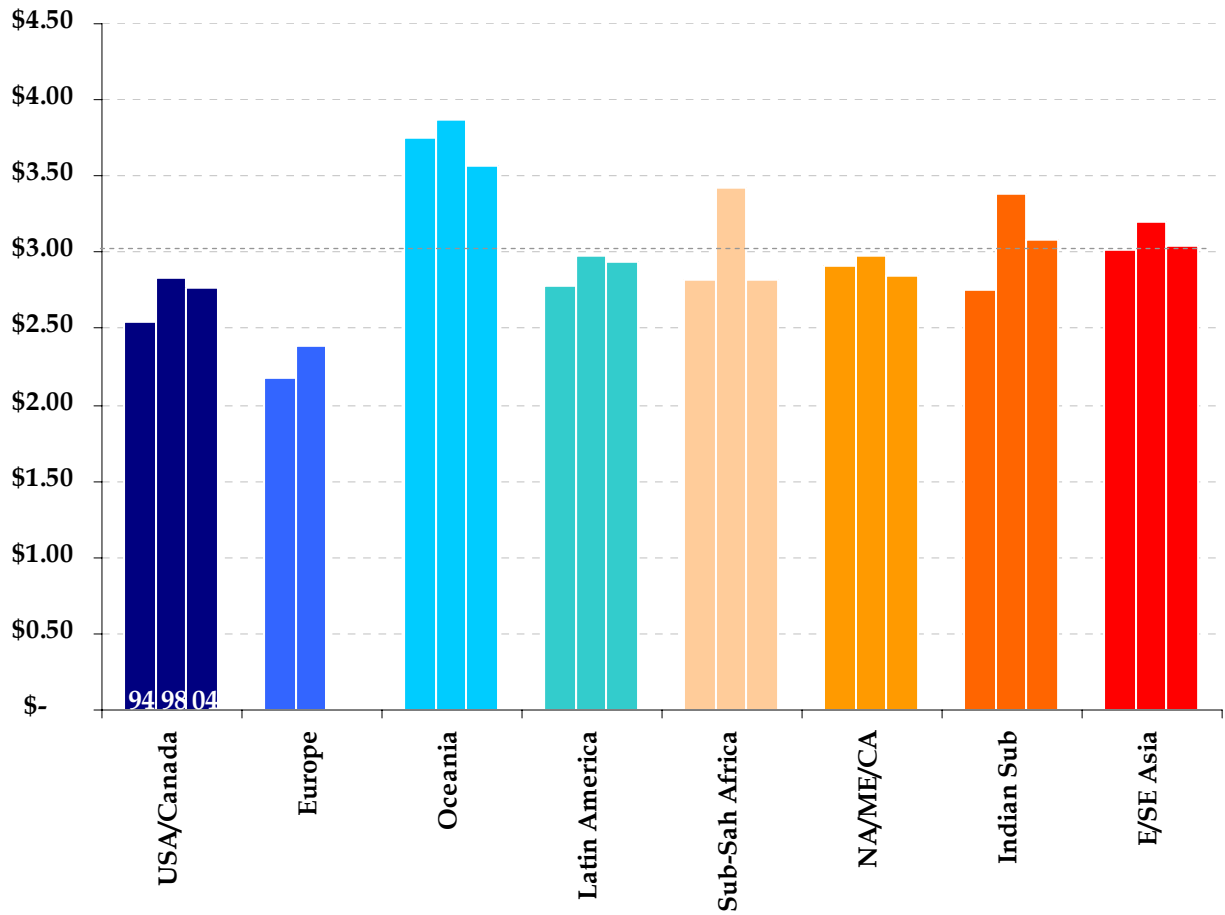
### Discussion Points

- What is the ultimate potential of the Asian market?

# NEW ZEALAND WMP EXPORT VALUE PER KILO BY DESTINATION

WMP export value per kg varies somewhat by region and appears to have drifted down in the past five years

New Zealand whole milk powder export value per kg by destination (NZ\$, 1994-2004)



### Discussion Points

- Why the regional variation?
- Why the rising sales to the US at a lower value?
- Why do we get more than the rest of the world for our WMP exports to Australia but less than the rest for our SMP exports?

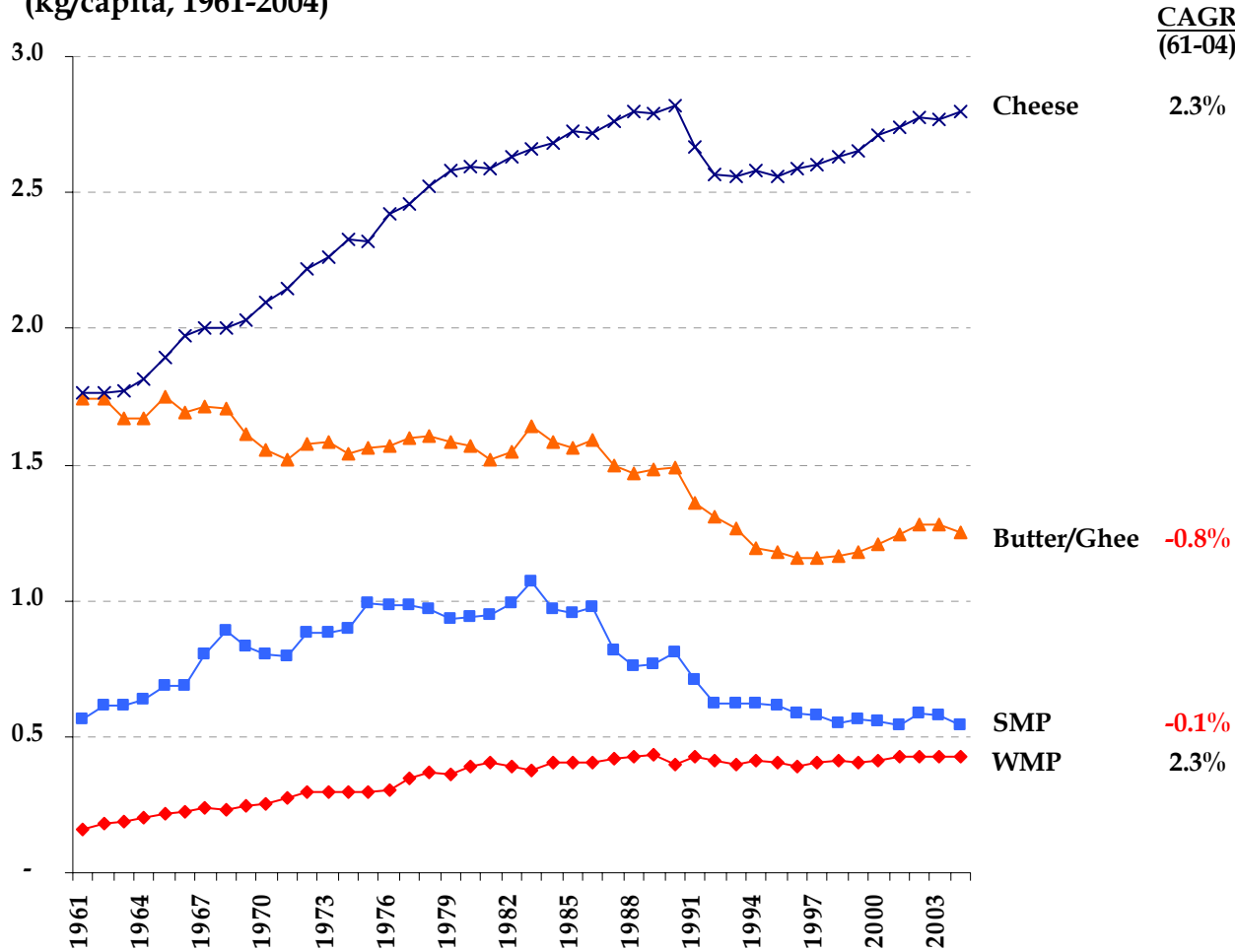
### Notes

- HS040221

# GLOBAL PER CAPITA SELECT DAIRY CONSUMPTION

On a global basis, consumption of cheese and WMP are growing, while SMP and butter are declining

Global per capita dairy consumption by select product (kg/capita, 1961-2004)



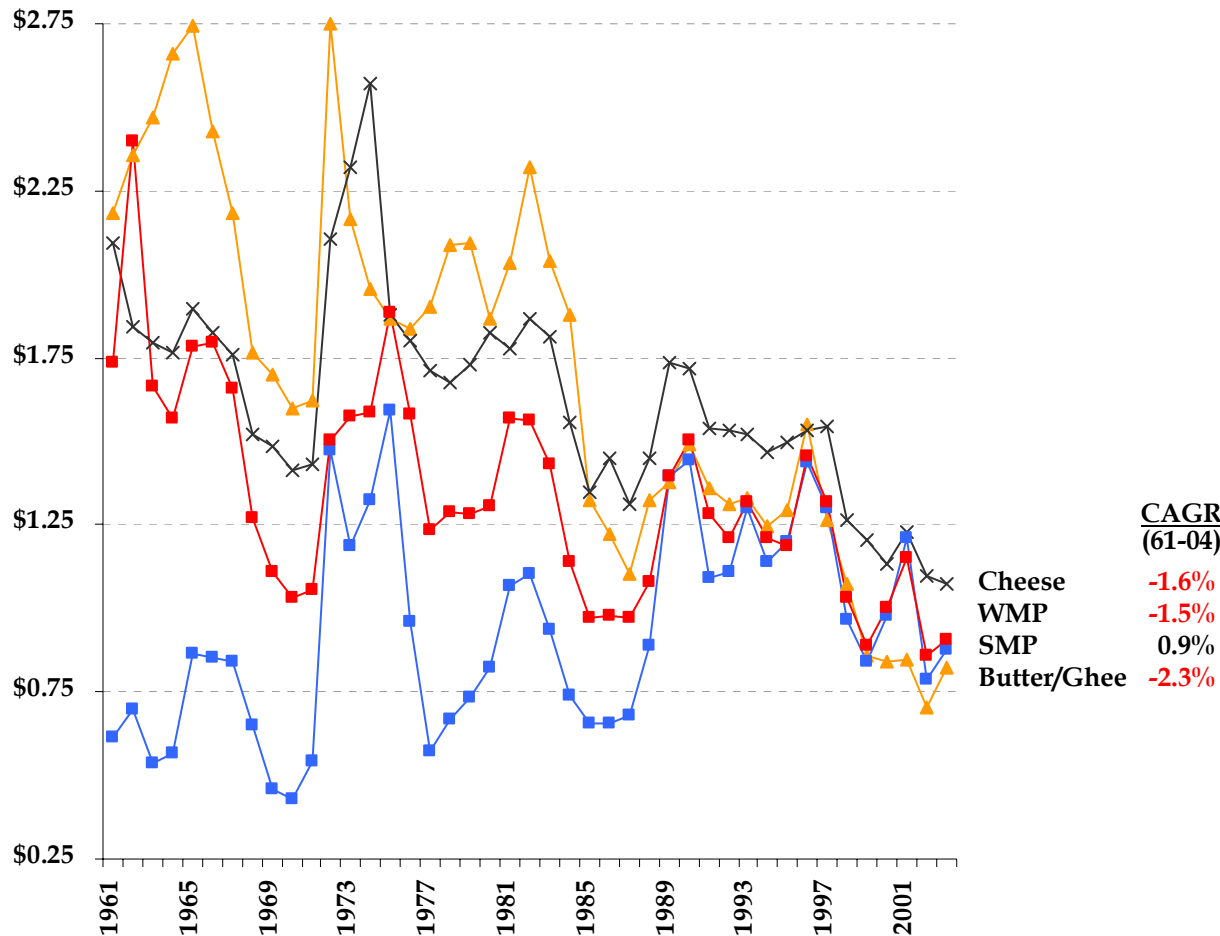
### Discussion Points

- Why is global cheese consumption growing?
- Why the decline of butter/ghee?
- Why the decline of SMP and growth of WMP?

# INFLATION-ADJUSTED EXPORT VALUE OF NZ DAIRY

This does not appear to be directly price related

Inflation adjusted New Zealand export price for select dairy products (US\$/kg., FOB, inflation adjusted; indexed to 1982 dollars; 1961-2003)



## Discussion Points

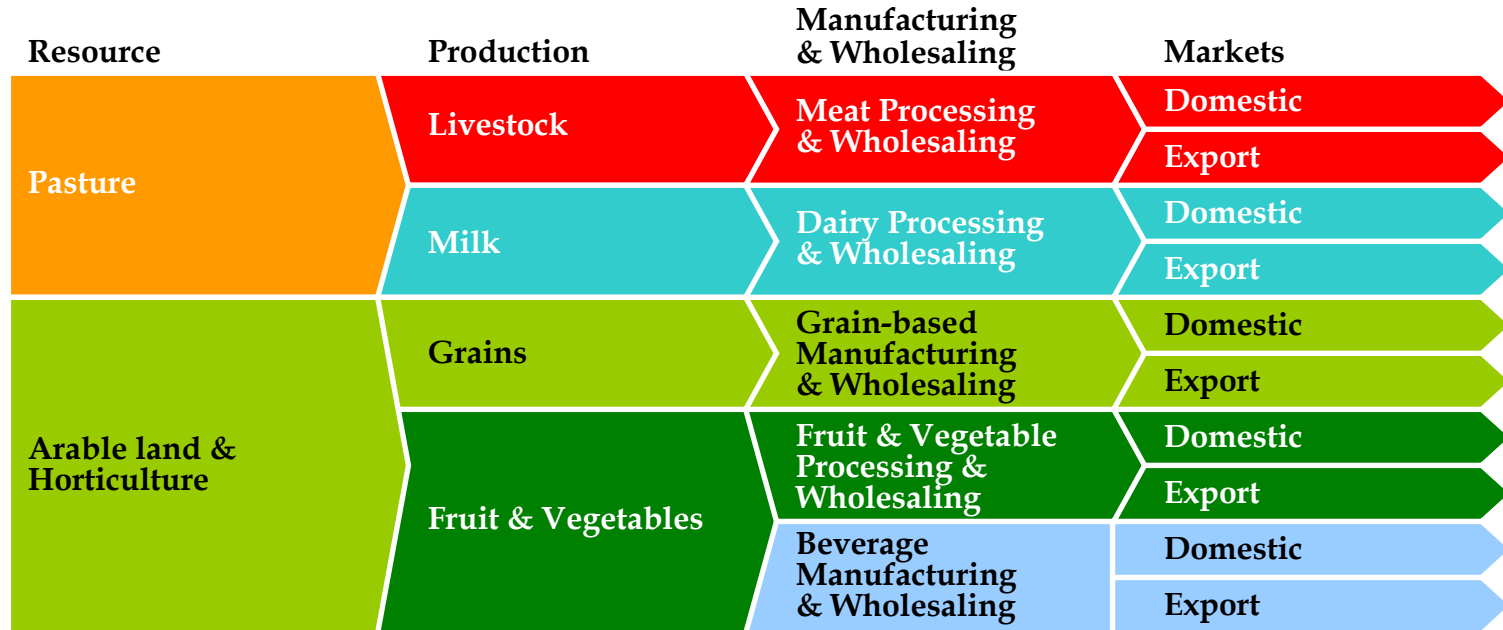
- Will prices continue to fall in real terms?
- If so, can we increase production faster than prices fall? (i.e. running to stand still)
- Why has the price gap between SMP and WMP closed?
- Chicken is 40% of the price of cheese per kilo; are they substitutes?

## Notes

- All values are inflation adjusted US dollars indexed to 1982 using the US CPI
- Represents value of New Zealand exports only

## 2. ARABLE LAND & HORTICULTURE BASED PRODUCTION

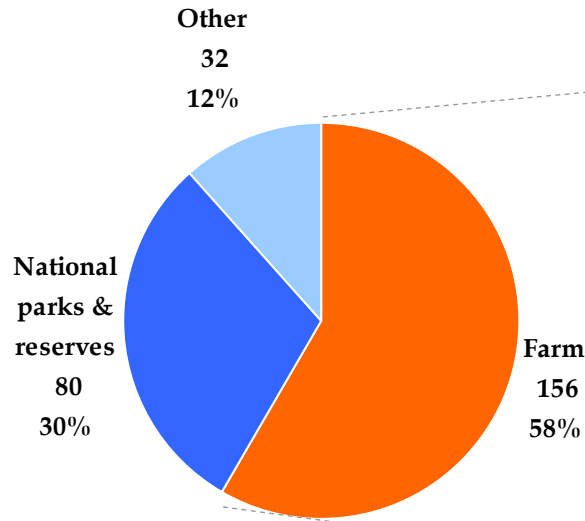
Plant-based foods & beverages are a product of arable and horticultural land



# LAND USE

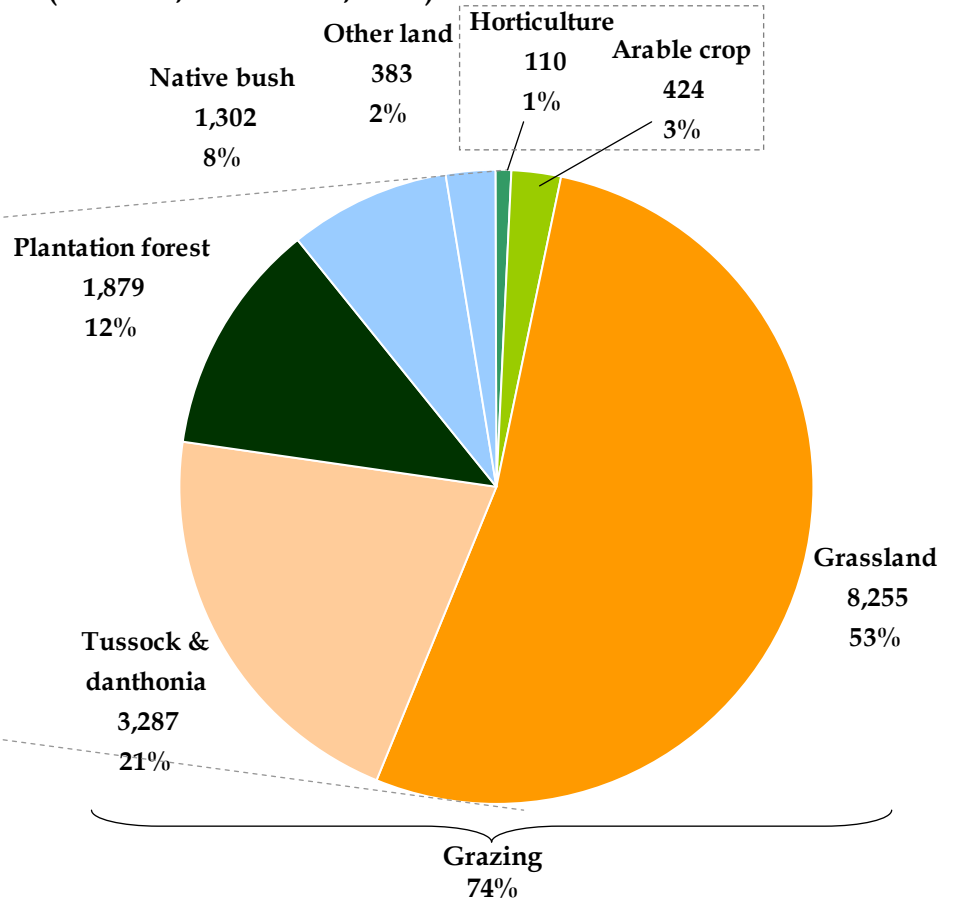
Arable crops and horticulture account for only 4% of farm land use

Total New Zealand land use (sqkm, thousands, 2002)



Total = 268,000 sqkm

Total New Zealand farm land use (hectares, thousands, 2002)



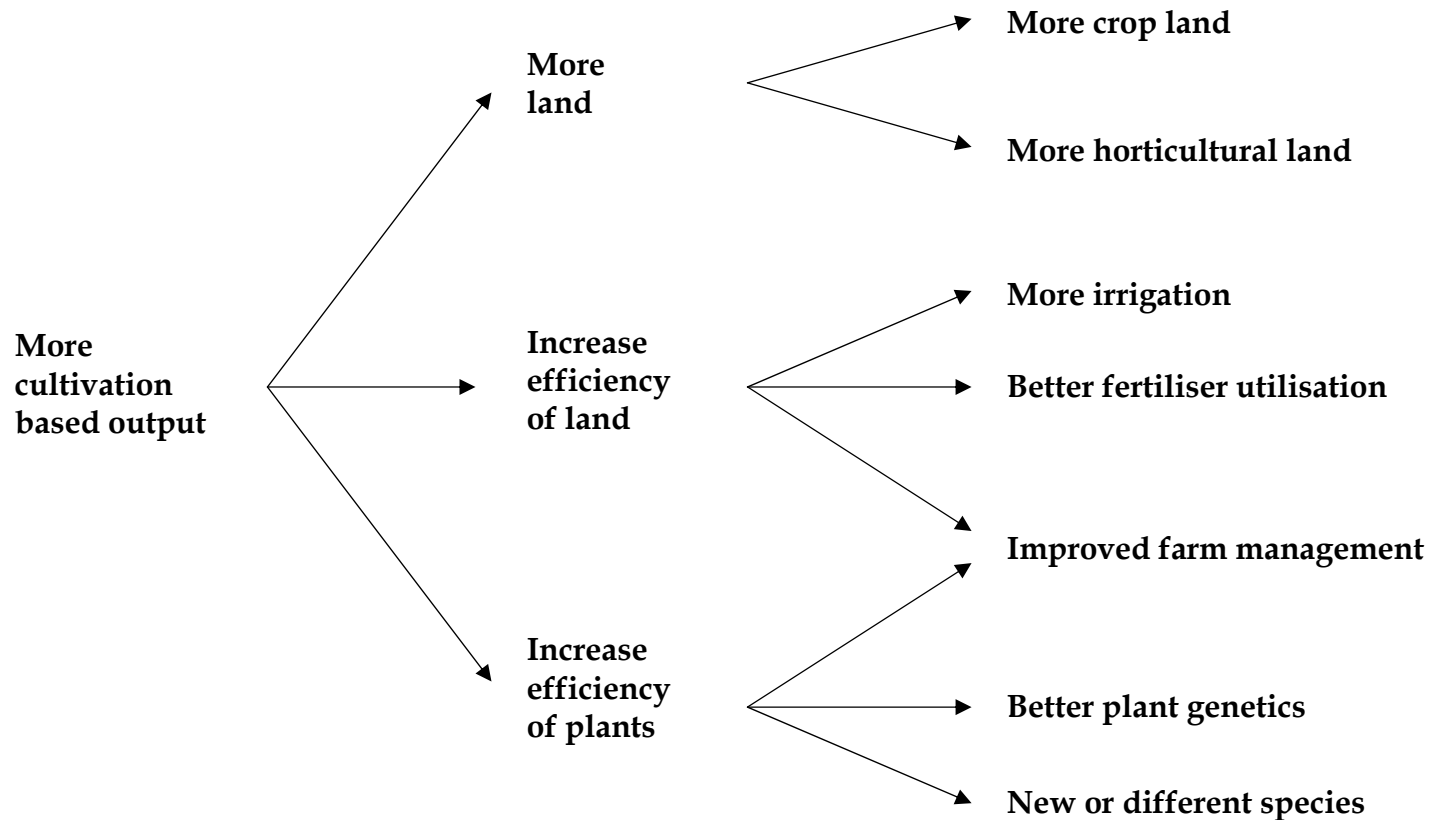
Total = 15,640,000 hectares



## DRIVERS OF INCREASED CULTIVATED LAND OUTPUT

There are a limited number of drivers of increased output from cultivated land

Key drivers of change in cultivated land output  
(model)



## POTENTIAL FOR TRANSFORMATIVE CHANGE

**While New Zealand will struggle to increase crop output, there appears to be opportunities in increased horticultural output**

Potential for transformative change in cultivated land output (model)

Objective	Key Driver	Potential for transformative change	Key Issues
More land	More crop land	Low	<ul style="list-style-type: none"> <li>- Competing land use (e.g. horses in Waikato)</li> <li>- Not a low cost producer of grains/pulses</li> </ul>
	More horticultural land	Medium	<ul style="list-style-type: none"> <li>- Increase in lifestyle blocks (+37,600ha/year)</li> <li>- More sheep-to-grapes/olives conversions</li> </ul>
Increase efficiency of land	More irrigation	High	<ul style="list-style-type: none"> <li>- Public opposition to new schemes</li> <li>- Cost of systems/new schemes</li> <li>- Market pricing of water</li> </ul>
	Better fertiliser utilisation	Medium	<ul style="list-style-type: none"> <li>- Groundwater pollution</li> <li>- Cost vs. returns</li> </ul>
	Improved farm/orchard management	Medium	<ul style="list-style-type: none"> <li>- Dispersed and fragmented population</li> <li>- Traditional attitudes</li> <li>- More efficient production systems</li> </ul>
Increased efficiency of plants	Better plant genetics	Medium	<ul style="list-style-type: none"> <li>- Improved cultivars of existing species</li> <li>- Consumer opposition to genetic modification</li> </ul>
	New or different species	Medium	<ul style="list-style-type: none"> <li>- Emerging new species (e.g. nuts, olives)</li> <li>- Increased biosecurity regulation limiting new species introduction<sup>1</sup></li> <li>- High cost of introducing new species</li> </ul>

## RECOMMENDATIONS

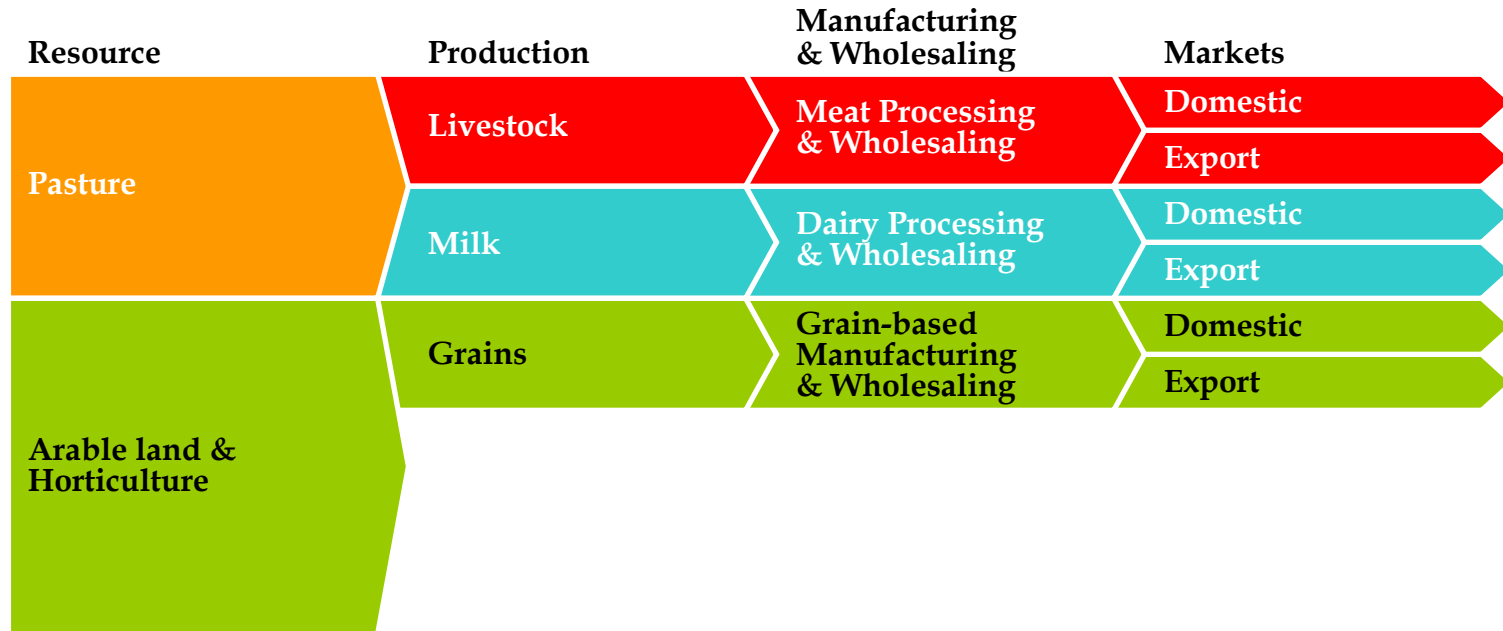
Based on our research, we make the following recommendations to the Taskforce

### Recommendations to Food and Beverage Taskforce to increase cultivated land output

Objective	Issue	Recommendations
More land	Massive growth of lifestyle blocks	<ol style="list-style-type: none"> <li>1. Control spread of lifestyle blocks through zoning rather than through minimum block size</li> <li>2. Research actual lifestyle land required per household (i.e. are we forcing them to take 20ha when they really want 2ha)</li> <li>3. Encourage systems to optimise production on lifestyle blocks (e.g. leasing by commercial farmers)</li> </ol>
	Decline in land under arable crops	<ol style="list-style-type: none"> <li>1. Research causes of arable crop land decline</li> <li>2. Research requirements for globally competitive grain production (e.g. new varieties)</li> </ol>
Increase efficiency of land	More irrigation	<ol style="list-style-type: none"> <li>1. Measure amount of water used by irrigation</li> <li>2. Expand area served by irrigation schemes</li> <li>3. Introduce market pricing to water to encourage efficient use of water resources</li> <li>4. Encourage use of drip irrigation</li> </ol>
	Better fertiliser utilisation	<ol style="list-style-type: none"> <li>1. Fund research into efficiency of fertiliser utilisation (more efficient/less runoff)</li> </ol>
	Improved farm management	<ol style="list-style-type: none"> <li>1. Ensure we have the best initial farm/orchard management training program</li> <li>2. Explore farm extension program to disseminate best practice</li> </ol>
Increased efficiency of plants	Better plants genetics	<ol style="list-style-type: none"> <li>1. Ensure access to leading international sources of plant genetics</li> <li>2. Understand regulatory barriers to introduction of new genetic material</li> <li>3. Continue to fund agricultural research</li> </ol>
	New or different species	<ol style="list-style-type: none"> <li>1. Government program to evaluate potential new livestock species</li> <li>2. Review Hazardous Substances and New Organisms Act to enable free and open access to non-indigenous species required for continued innovation (no new commercial plant species imported since act introduced (ie 7 years))</li> <li>3. Explore role of government in infant industry support</li> </ol>

## 2A. ARABLE LAND BASED PRODUCTION

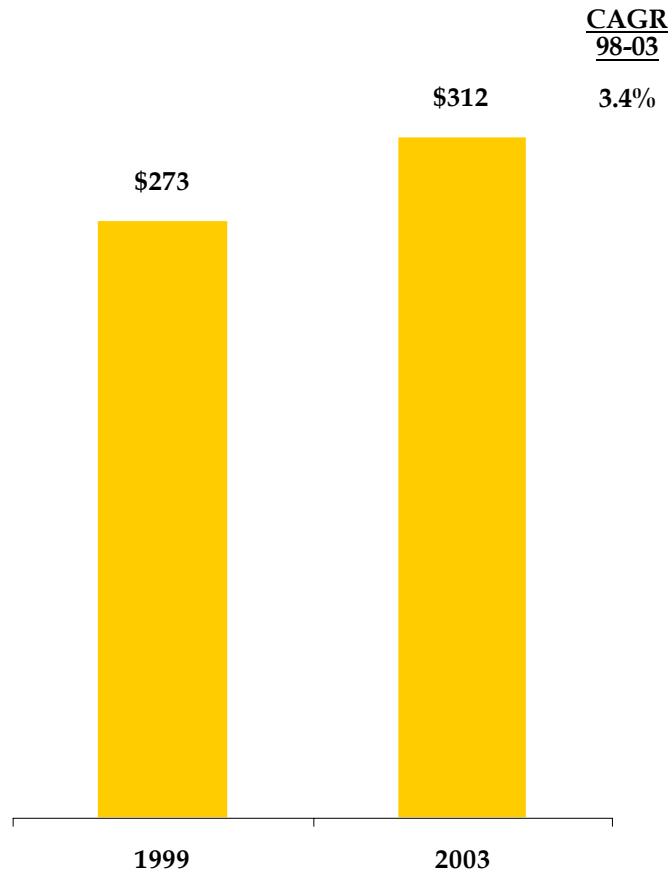
Arable land primarily produces grain and fodder crops



## FARM TURNOVER GROWTH - GRAIN

Grain farm turnover only grew at 3.4% per annum between 1999-2003

Total grain farm turnover  
(dollars, millions, 1999-2003)



### Discussion Points

- Grain has shown slow growth

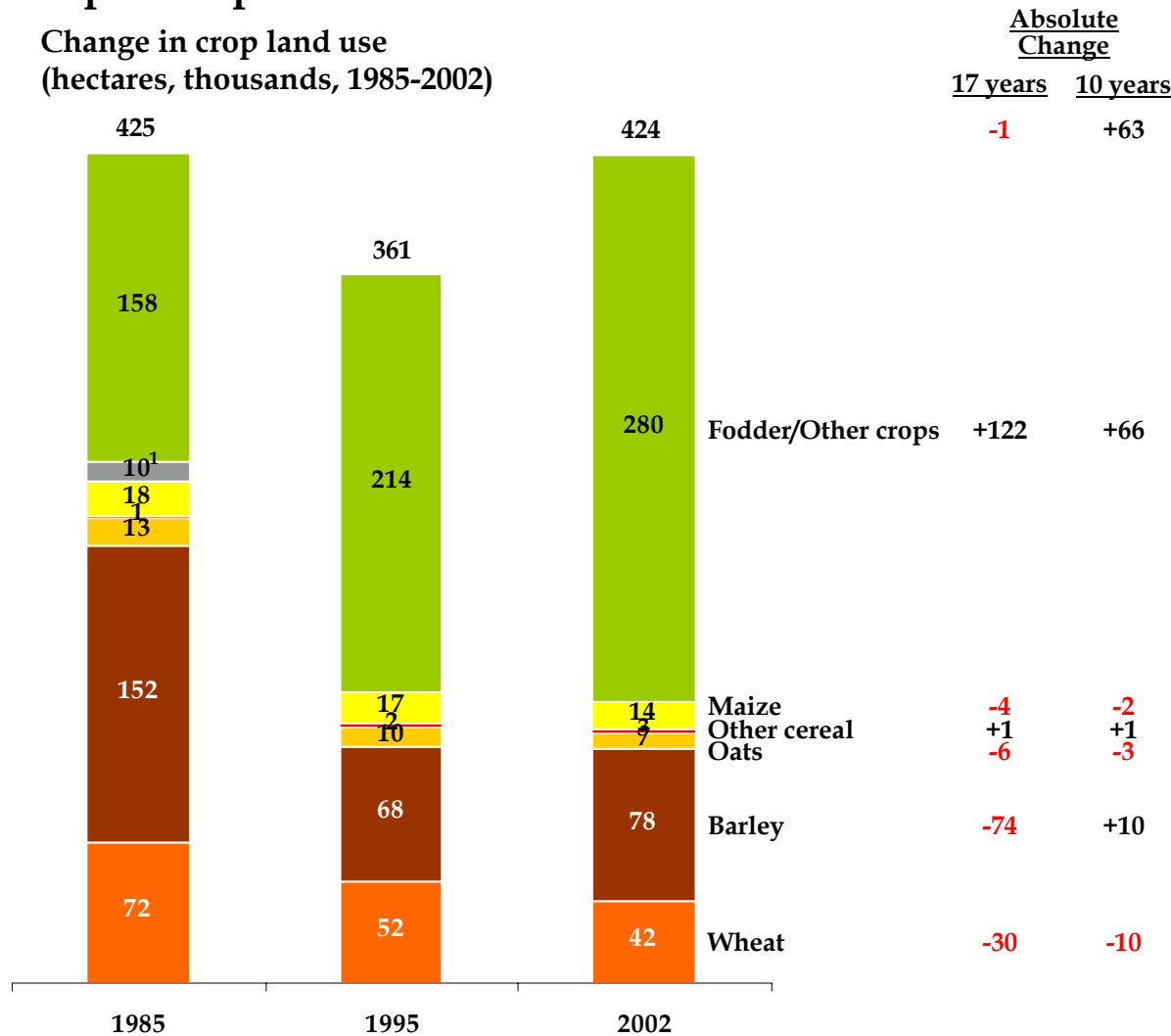
### Notes

- AES 2004 data not yet available
- Comparable data not available for earlier periods
- Methodology defines farm by primary income source
- Actual dollars; not inflation adjusted

## CHANGE IN FARM LAND USE - GRAINS & OTHER CROPPING, FODDER

While total land use for grain, arable and fodder is flat, within that, grains are down and fodder crops are up

Change in crop land use  
(hectares, thousands, 1985-2002)



### Discussion Points

- Why did land used in barley production fall dramatically ?
- Role of dairy in the growth of fodder
- No competitive advantage in grain or grain-based products (e.g. poultry, pigs, biscuits, spirits)

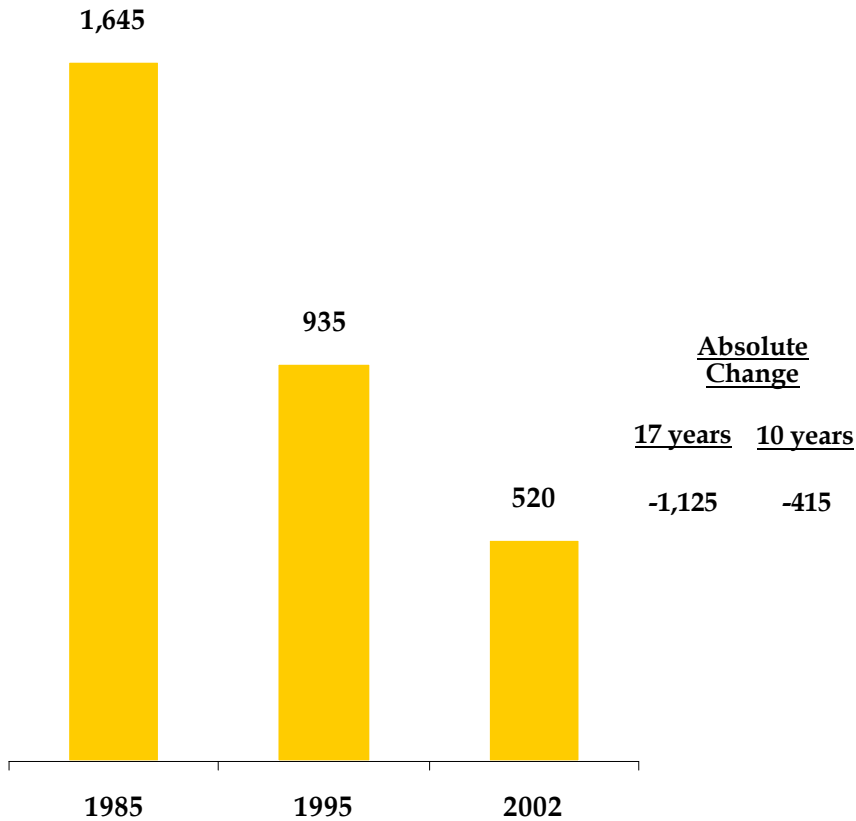
### Notes

- Total land use across all farm types (including those classified as pastoral)
- Maize excludes sweetcorn
- Fodder crops include kale, rape, swedes, turnips, and others

## CHANGE IN NUMBER OF FARMS BY TYPE - GRAIN & OTHER CROPPING

The number of grain growing farms has declined dramatically; there are now only 520 farms focused on growing grains and other crops

Number of grain & other cropping farms  
(farms, actual, 1985-2002)



### Discussion Points

- Relative importance of small number of farm to total food industry
- Why is the number of grain farms declining? Will this decline continue?
- Role of economies of scale

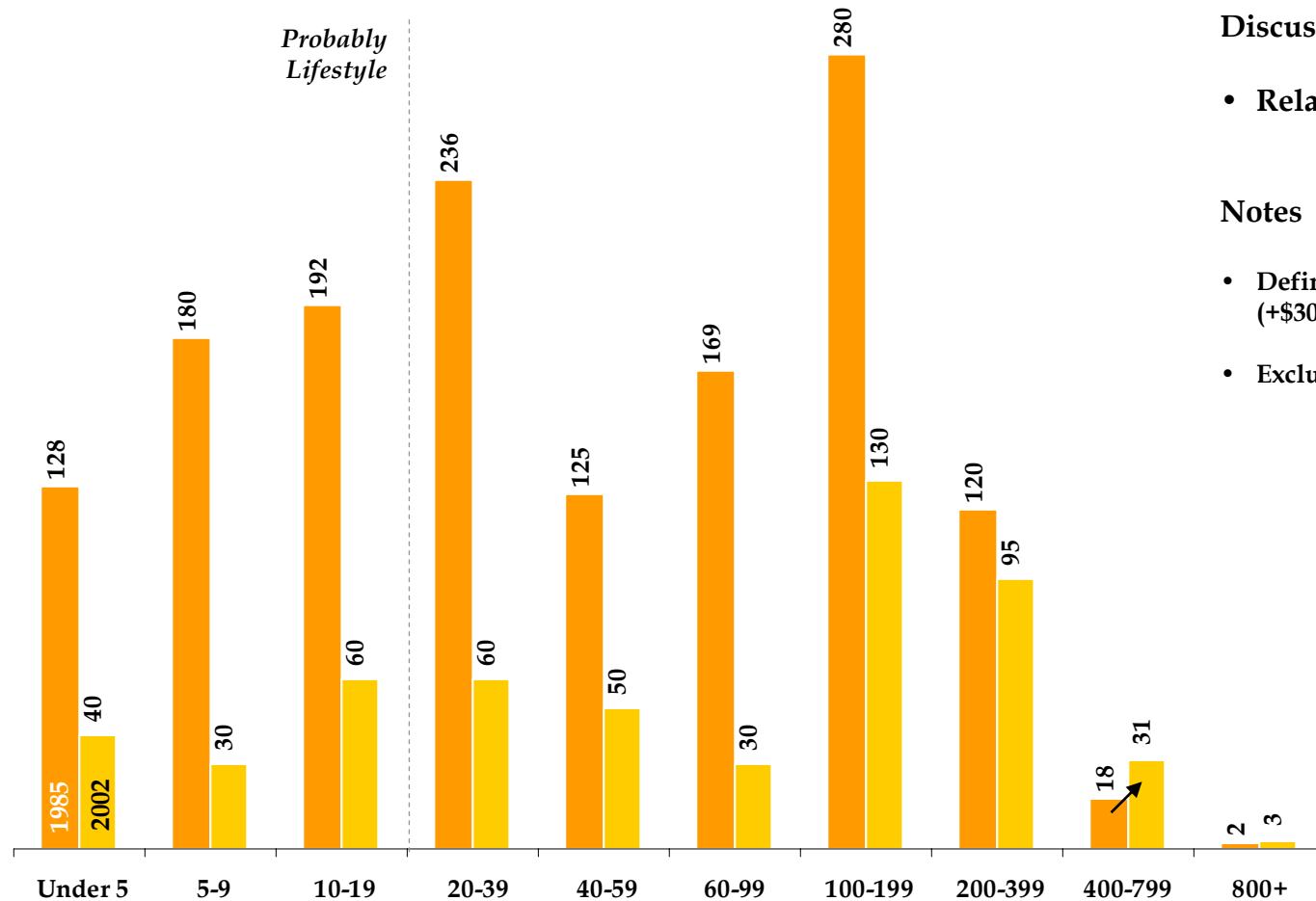
### Notes

- Farms defined at source by predominant source of income
- Does not include grain/sheep/beef farms classified under pastoral (for all years)

## NUMBER OF FARMS BY SIZE - GRAINS & OTHER CROPPING

The number of grain and other crop farms has fallen over the past two decades except for farms over 400ha

Number of grain & other crops farms by size  
 (#of farms, by size of farm, hectare, 1985-2002)



### Discussion Points

- Relative impact of economies of scale

### Notes

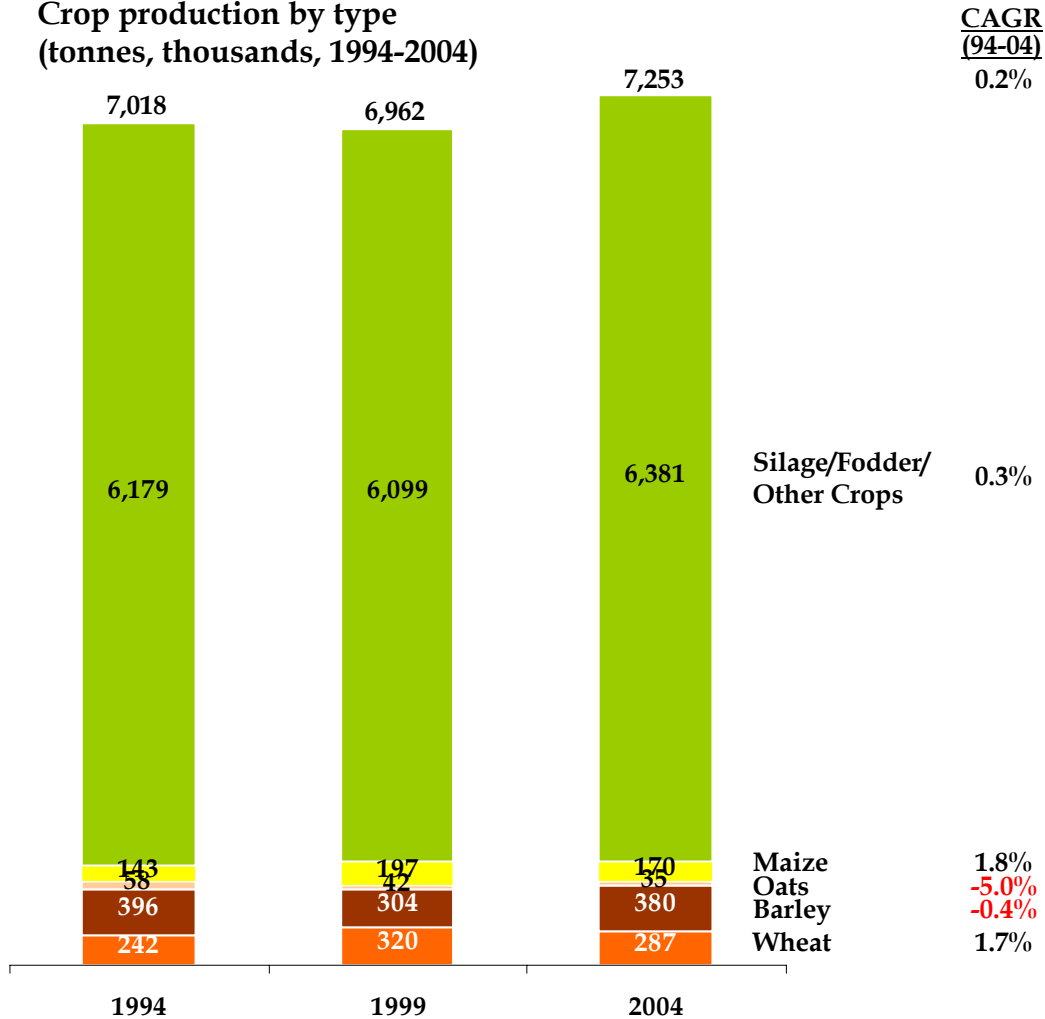
- Defined as farms registered for GST purposes (+\$30,000pa)
- Excludes flowers/plant nurseries (2,500)



# PRODUCTION - GRAINS & OTHER CROPPING, FODDER

## Grain and silage production is flat

Crop production by type  
(tonnes, thousands, 1994-2004)



### Discussion Points

- Very low to negative growth of grain production
- Wider implications of a grain industry that is not globally competitive

### Notes

- Data based on MAF estimates and is not robust
- Includes silage/fodder produced on farm for own use

## INDUSTRY STRUCTURE - GRAIN-BASED FOOD MANUFACTURING & WHOLESALING

### Grain-based food manufacturing can be split into three distinct segments

- Three distinct segments:
  - Bread and other fresh baked goods
    - Duopoly of Goodman Fielder (Australian) and George Weston (British)
    - Created by economies of scale in daily distribution of fresh baked goods
  - Breakfast cereals
    - Three key companies: Sanitarium (Church-owned charity), Kelloggs (US; public) and Hubbards (private)
    - Two manufacture in New Zealand (Sanitarium, Hubbards), one imports from Australia (Kelloggs)
  - Biscuits, pasta and other shelf-stable grocery lines
    - Biscuits primarily comprises Griffins (local production; French ownership) and Arnotts (Australian production; US ownership)
    - Pasta and other grocery lines a mixture of smaller local producers (e.g. Tasti) and imports (e.g. San Remo)
- Significant overlap with “other food”; should not be looked at in isolation

## KEY COMPANIES - GRAIN-BASED FOODS

The large players in the grain-based foods sector are either the New Zealand operations of global or Australian category leaders or a handful of larger local firms

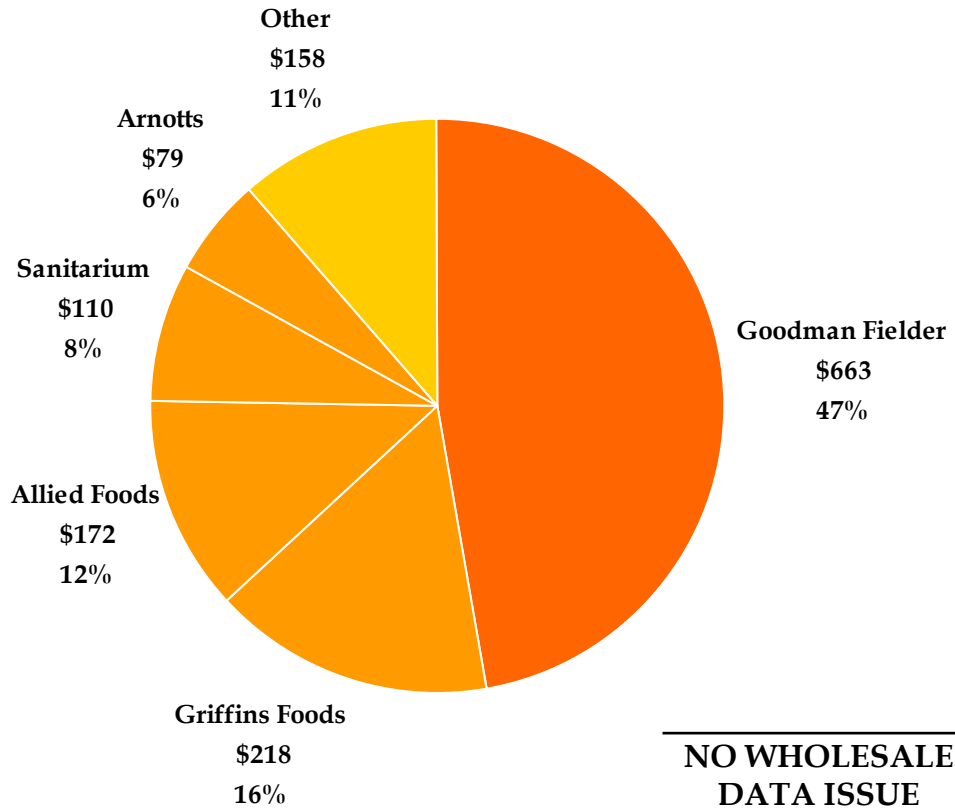
Key companies in grain-based manufacturing and wholesaling

Company	Turnover (NZ\$; m; 2004)	Employees	Ownership	Activities
Goodman Fielder NZ/ Bluebird Foods	\$663	2,563	Australian Public Listed	- Production of bread, snack foods and grocery lines
Griffins Foods	\$218	901	France Public Listed	- Production of biscuits - Subsidiary of Danone
Allied Foods (NZ)	\$172	1,554	Australia Public Listed	- Subsidiary of George Weston Foods Australia (itseld a subsidiary of Associated British Foods)
Sanitarium	\$110	390	New Zealand Charity	- Manufacturer of breakfast cereal and grocery products - Sister company in Australia with similar ownership
Arnott's New Zealand	\$79	61	United States Public Listed	- Importer/wholesaler of biscuits and grocery products - Owned by Campbell's Soup (US; Public)
Kellogg (NZ)	\$51	21 <sup>1</sup>	United States Public Listed	- Importer/wholesaler of breakfast cereal
San Remo Pasta	\$31	14 <sup>1</sup>	Australia Private	- Importer of Australian made pasta
Hubbards Foods	?	150	New Zealand Private	- Manufacturer of breakfast cereal
Tasti Products	?	230	New Zealand Private	- Manufacturer of grocery products

# MARKET SHARE - GRAIN-BASED FOODS

A small number of companies account for most grain-based foods

New Zealand grain-based manufacturing and wholesaling sales market share (% of sales; 2004)



### Discussion Points

- Why is this dominated by global multinationals? What are the implications of your answer to the overall New Zealand food industry?

### Notes

- Total currently does not include wholesale turnover leading to likely understatement of other
- Market share represents New Zealand wholesale domestic sales and export sales (at border); does not include international sales or margins

## ACQUISITIONS - GRAIN-BASED FOODS

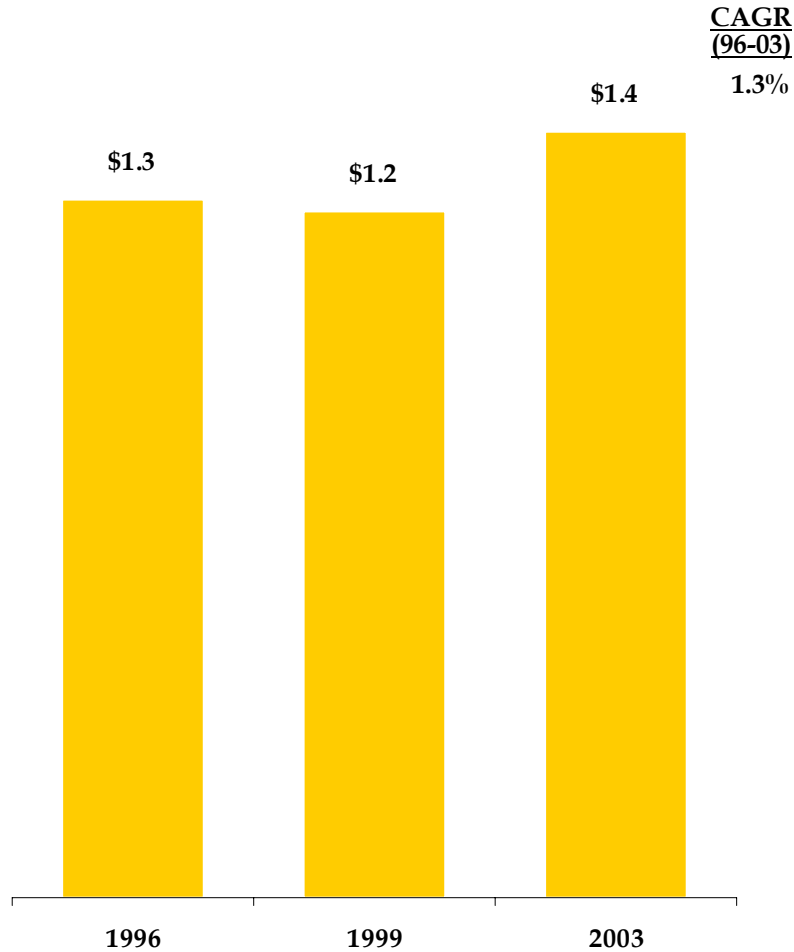
There have been numerous acquisitions recently of grain-based manufacturers

Acquiror	Acquiree	Date	Notes
Burns Philp	Goodman Fielder	2003	Burns Philp acquires Australian listed Goodman Fielder including significant New Zealand operations
Sanitarium	Lisa's Foods	Mar 2003	Dips and Spreads business
Harraway & Sons	Nicola's Organics	Nov 2002	Dunedin porridge company diversifies into organics
Cadbury	Snack bars business of Mother Earth	Feb 2002	Snack bar production
Goodman Fielder	Ernest Adams	Oct 1999	Baked goods business with turnover of \$44.4m
Goodman Fielder	Aspak Foods	1999	Goodman Fielder acquired 66% outstanding shares in Aspak Foods

# GRAIN-BASED FOOD MANUFACTURING TURNOVER GROWTH

The grain-based food sector is struggling to grow

Flour, cereal & bakery manufacturing turnover  
(dollars, millions, 1996-2003)



### Discussion Points

- Drivers of low growth in flour, cereal & grain segment

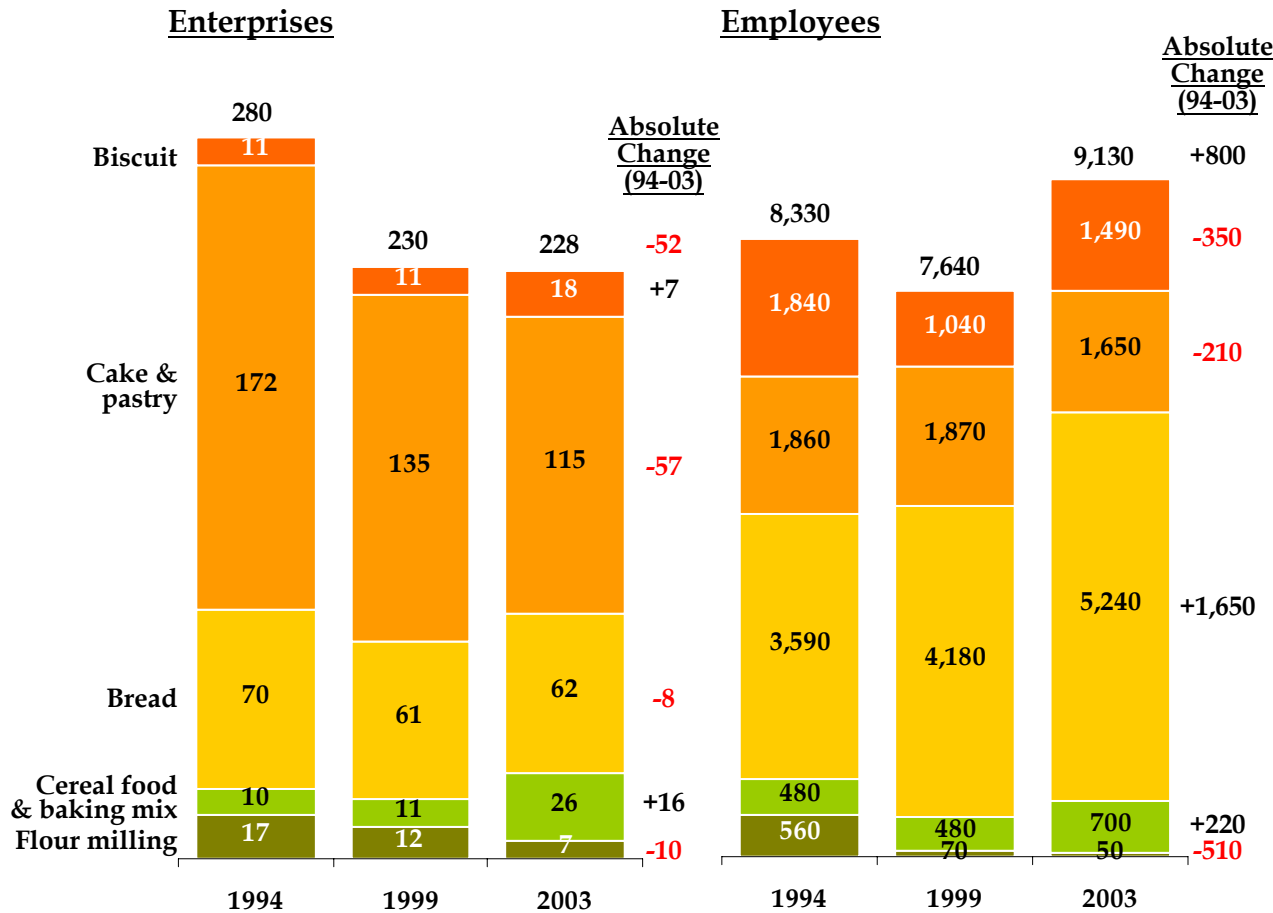
### Notes

- Excludes bakery wholesaling
- No data available prior to 1996 (AES); 2004 data not yet available

# GRAIN-BASED PRODUCT MANUFACTURING

There are fewer cereal-based product manufacturing enterprises, but overall employment is up

Cereal-based product manufacturing statistics  
(enterprises, employees, actual, 1994-2003)



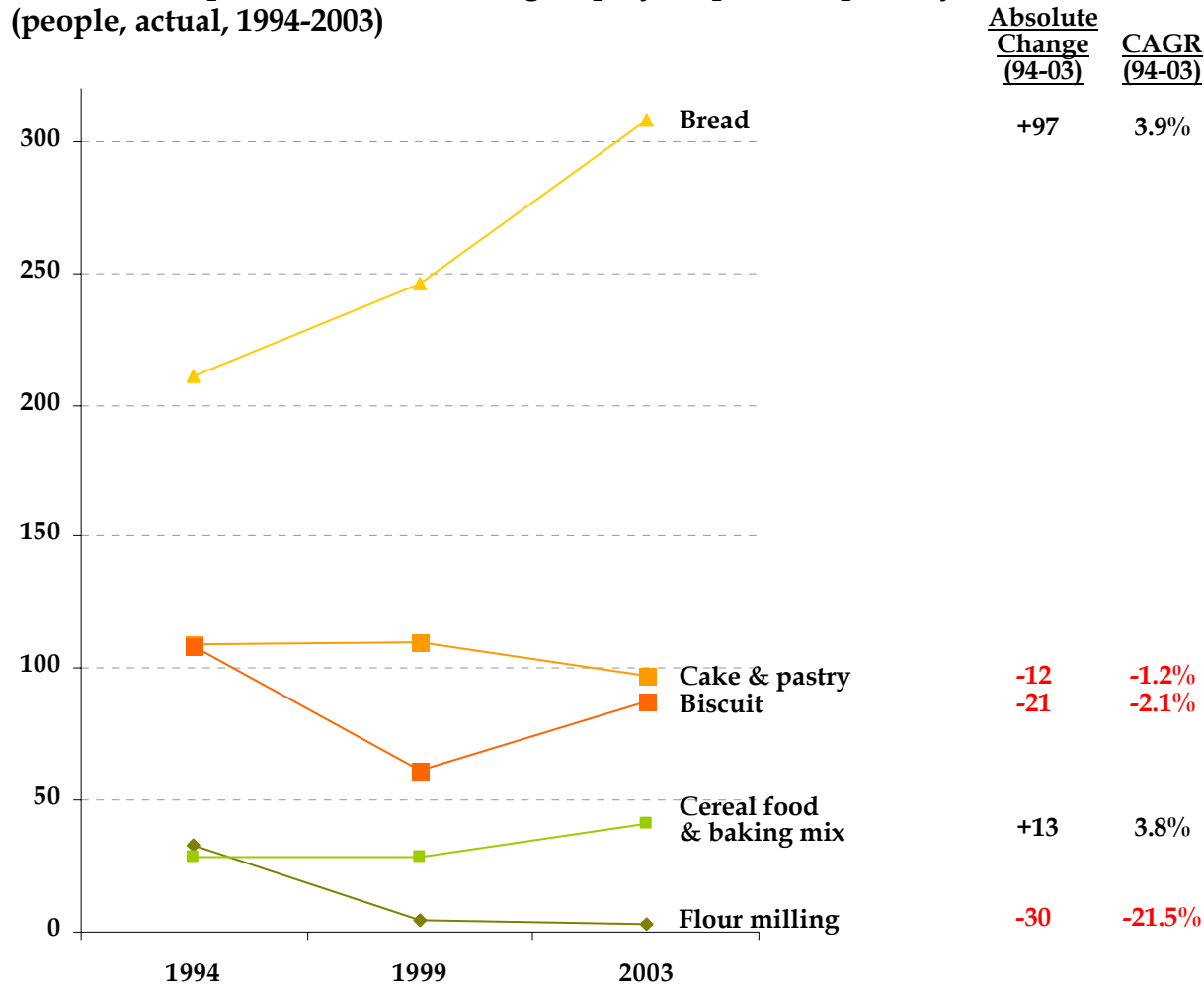
## Discussion Points

- Is the decline of flour milling a result of an uncompetitive primary sector?
- Growth of bread employment

# GRAIN-BASED PRODUCT MANUFACTURING EMPLOYMENT PER ENTERPRISE

## Employment per enterprise is growing in bread and cereal food, but declining elsewhere

Cereal-based product manufacturing employees per enterprise by sector  
(people, actual, 1994-2003)



### Discussion Points

- Drivers of growth in bread employment

### Notes

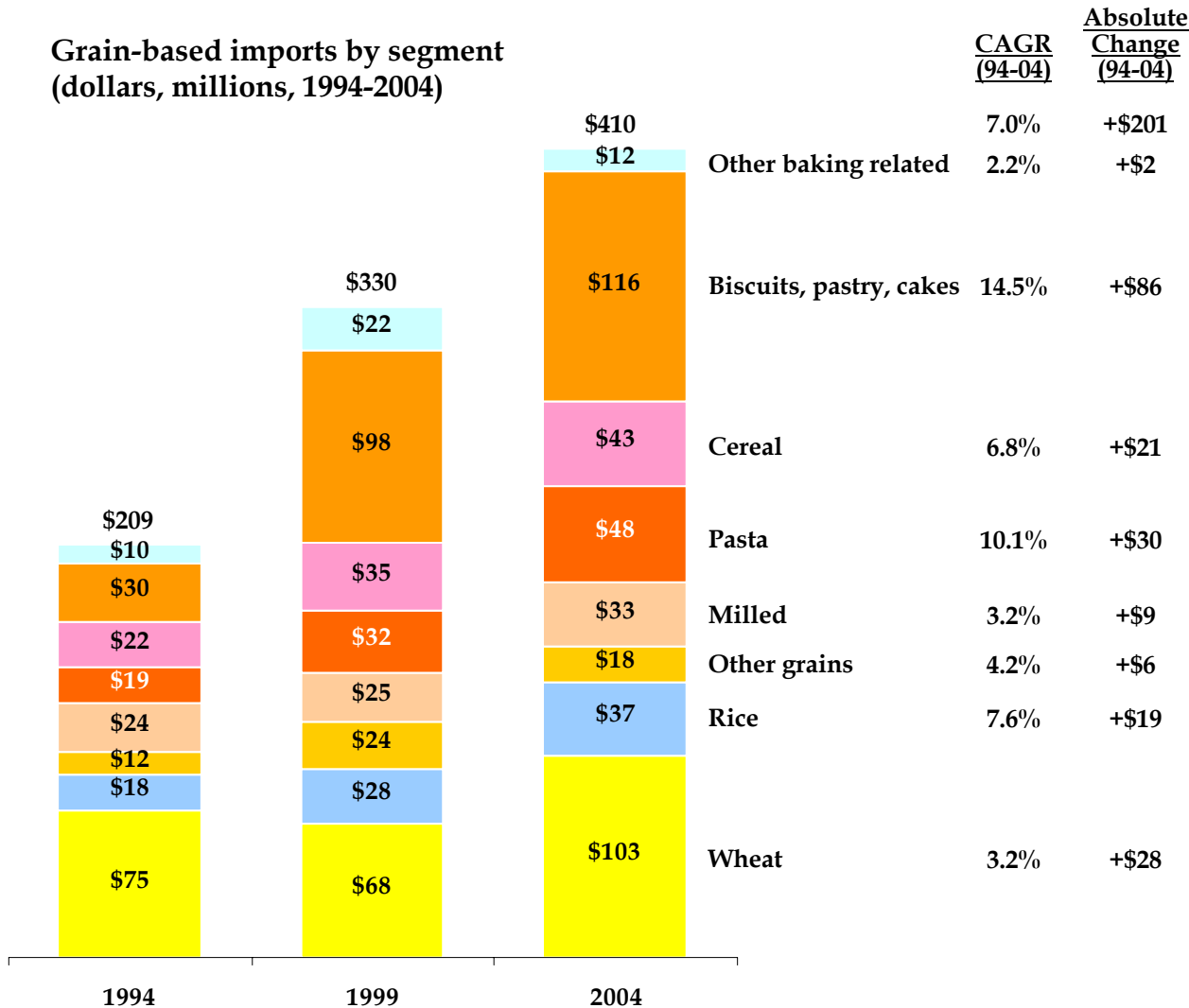
- Includes working proprietors
- Total employees not FTE



# IMPORTS BY SEGMENT - GRAIN-BASED FOODS

Imports of grain and grain based foods are growing strongly

Grain-based imports by segment (dollars, millions, 1994-2004)



## Discussion Points

- Role of changing tastes
- Role of changing ethnic makeup
- Level of Australian comparative advantage

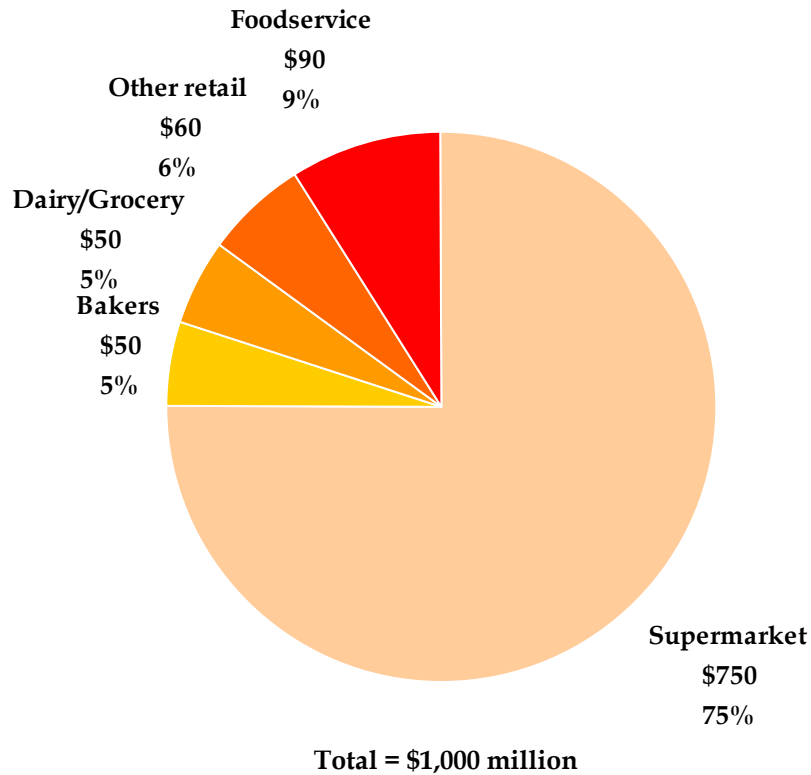
## Notes

- Details of classification:
  - Wheat (HS1001)
  - Rice (HS1006)
  - Other grains (remainder of HS10)
  - Milling (HS11)
  - Pasta (HS1902)
  - Cereal (HS1904)
  - Biscuits, pastry, cakes (HS1905)
  - Other baking related (remainder of HS19)

## DOMESTIC MARKET - GRAIN-BASED FOODS

The domestic market for grain-based foods has wholesale turnover of \$1 billion

Wholesale purchases of fruit & vegetables by channel  
(dollars, millions, 2004)



### Discussion Points

- Relative strength of supermarket channel

### Notes

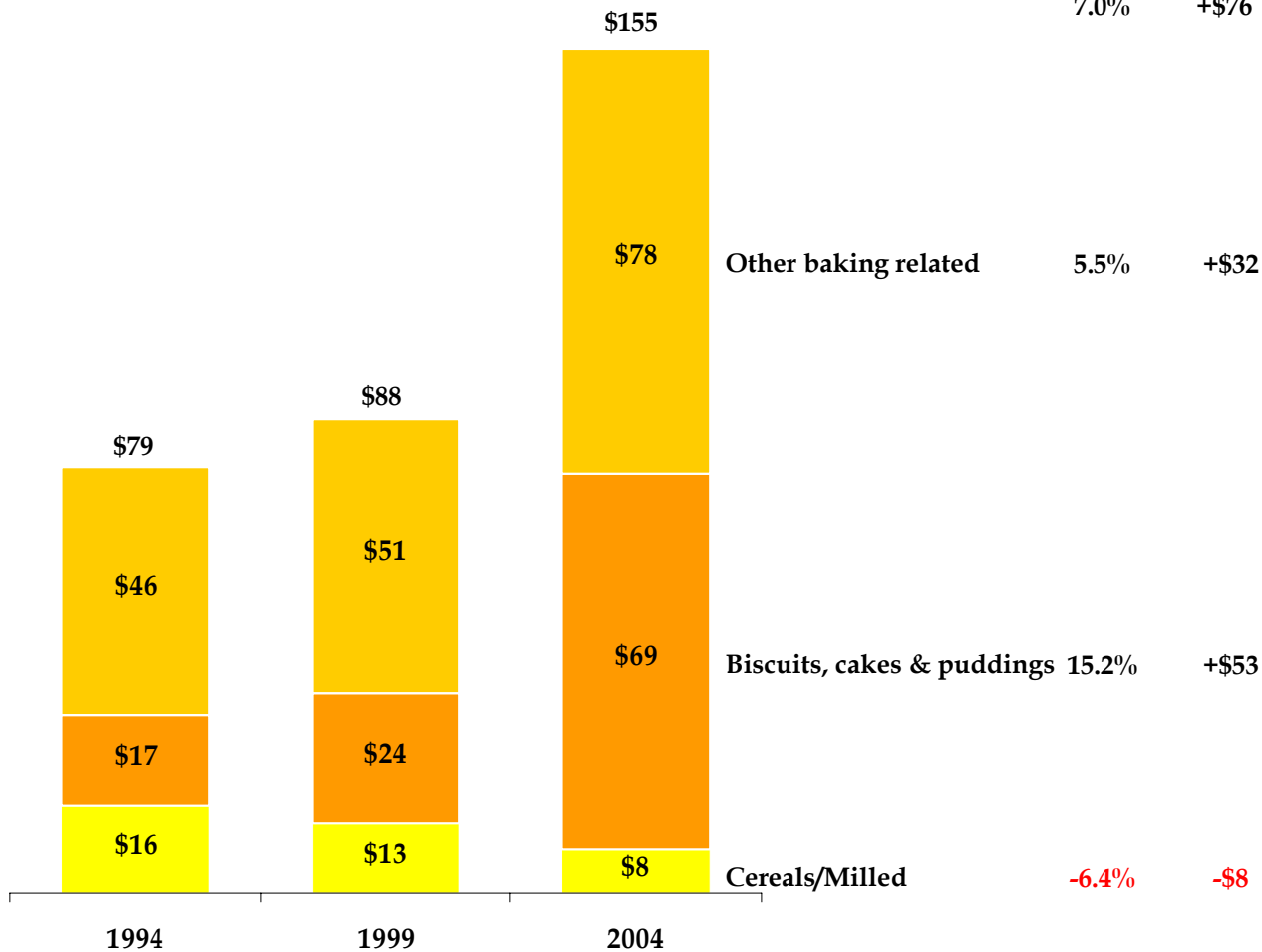
- Represents wholesale purchases of grain-based foods at cost to segment not retail sales to consumers
- Includes purchases by retail bakers (e.g. Baker's Delight) of ingredients

# EXPORTS BY SEGMENT - GRAIN-BASED FOODS

Growth in grain-based food export appears to be driven by processed products

Grain-based exports by segment (dollars, millions, 1994-2004)

Segment	CAGR (94-04)	Absolute Change (94-04)
Cereals/Milled	-6.4%	-\$8
Biscuits, cakes & puddings	15.2%	+\$53
Other baking related	5.5%	+\$32
<b>Total</b>	<b>7.0%</b>	<b>+\$76</b>



### Discussion Points

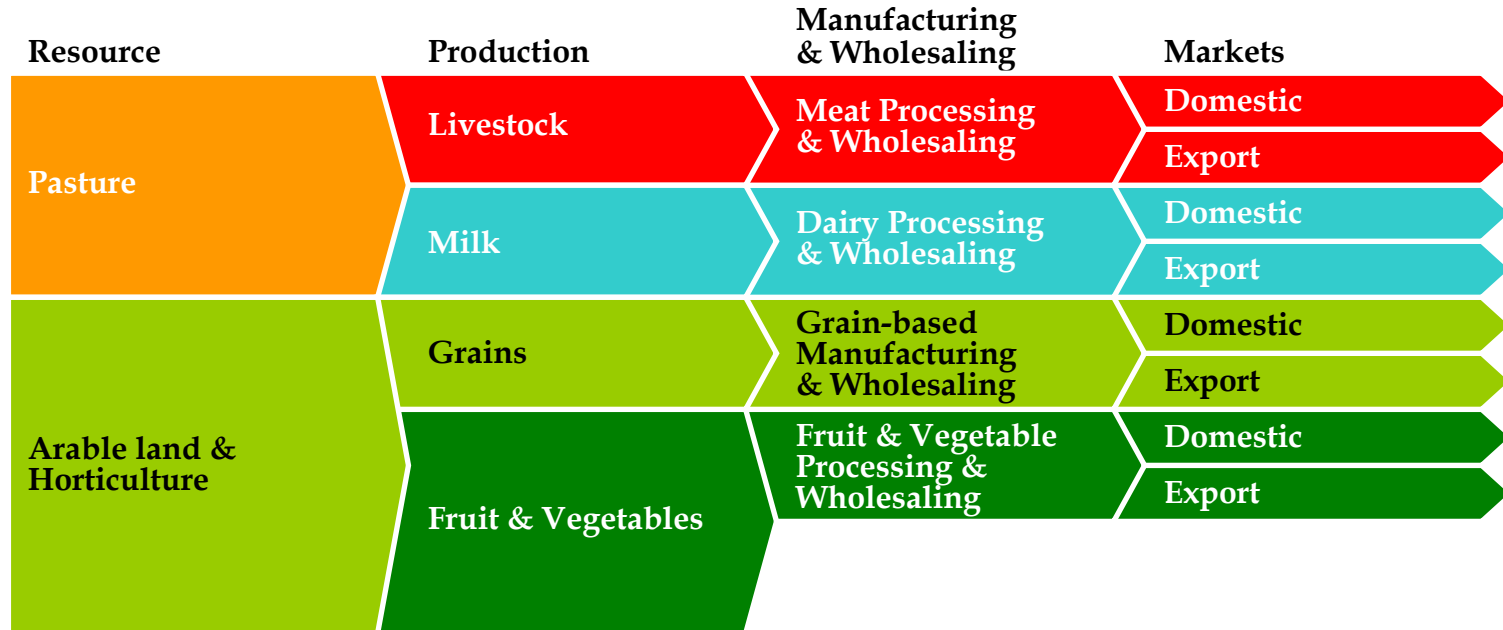
- Influence of low-cost dairy
- How much of this is dairy tariff-busters?

### Notes

- Details of classification:
  - Cereals/Milled (HS10,HS11)
  - Cakes & puddings (HS190590)
  - Other baking related (rest of HS19) excluding dairy malt extract (HS190190)

## 2B. HORTICULTURE BASED PRODUCTION

Horticulture produces fruits and vegetables



## SWOT ANALYSIS - HORTICULTURE INDUSTRY

The history of horticulture in New Zealand is based on innovation; this needs to continue

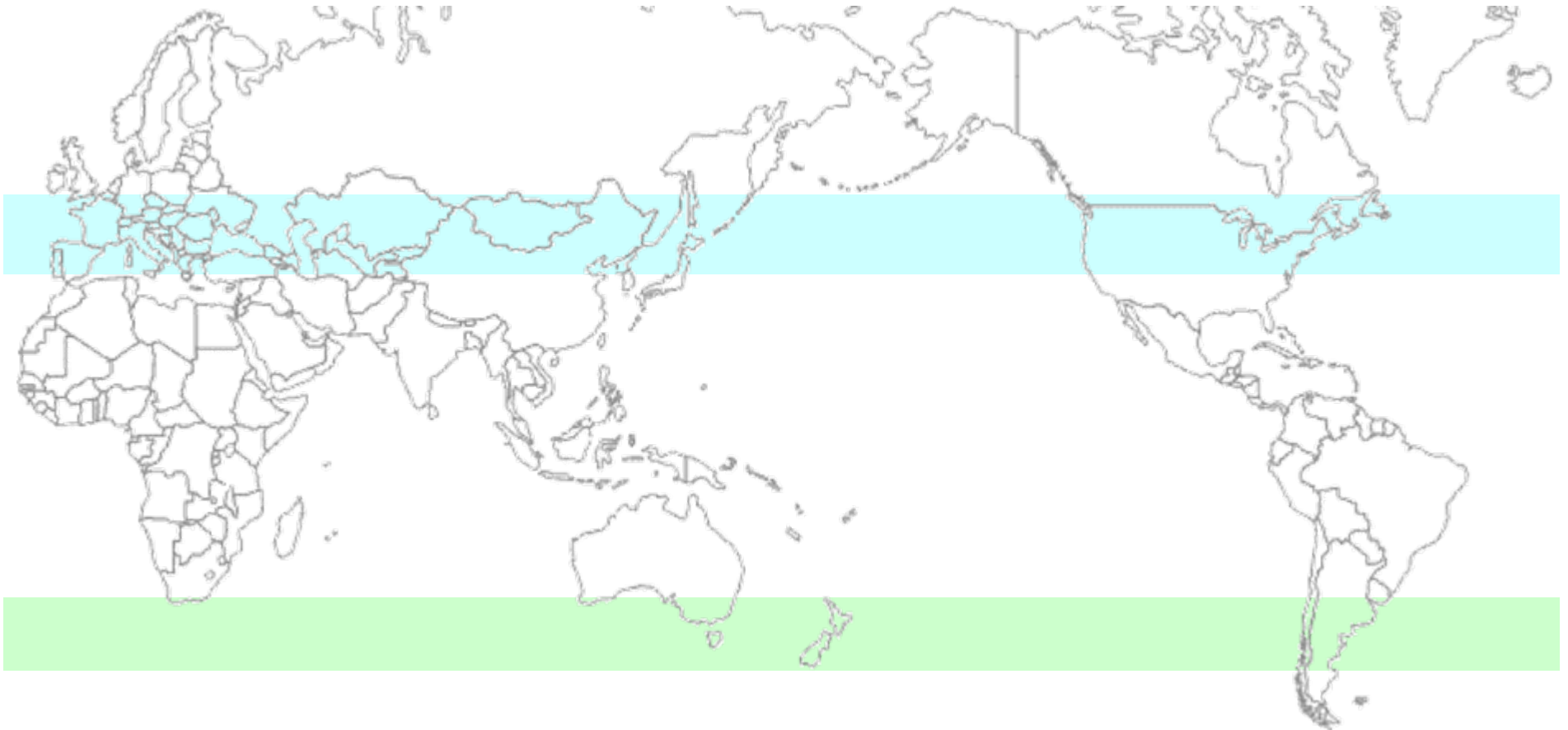
SWOT analysis of New Zealand in global horticulture

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>- Long history of new fruit development</li> <li>- Research and development of new cultivars</li> <li>- Counter seasonal to Northern Hemisphere</li> <li>- Narrow seasonal window with only four competitors</li> <li>- Attractive climatic conditions and soil characteristics</li> <li>- Proximity to and capability to serve Asian markets where the higher-quality/higher cost differentiated model is rewarded (specifically Japan)</li> </ul>	<ul style="list-style-type: none"> <li>- Fragmentation of the industry</li> <li>- Limited ability to supply fruit year round</li> <li>- Higher cost position relative to Chile</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>- Aging baby boomers focusing on healthy living</li> <li>- Growth of functional foods</li> <li>- Potential of the Australian market</li> <li>- Potential for further growth in the United States (if the right model can be found)</li> <li>- New unique and controlled varieties</li> <li>- Improved yields</li> </ul>	<ul style="list-style-type: none"> <li>- Growing production of apples, wine grapes and kiwifruit in China</li> <li>- Growing global consolidation of the wine industry</li> <li>- Increasing transport costs</li> <li>- Consolidation of Japanese retailers increasing relative strength</li> </ul>

## SEASONAL WINDOW

One of New Zealand's key strengths is its narrow seasonal window that it shares with only four competitors (Australia, South Africa, Chile and Argentina)

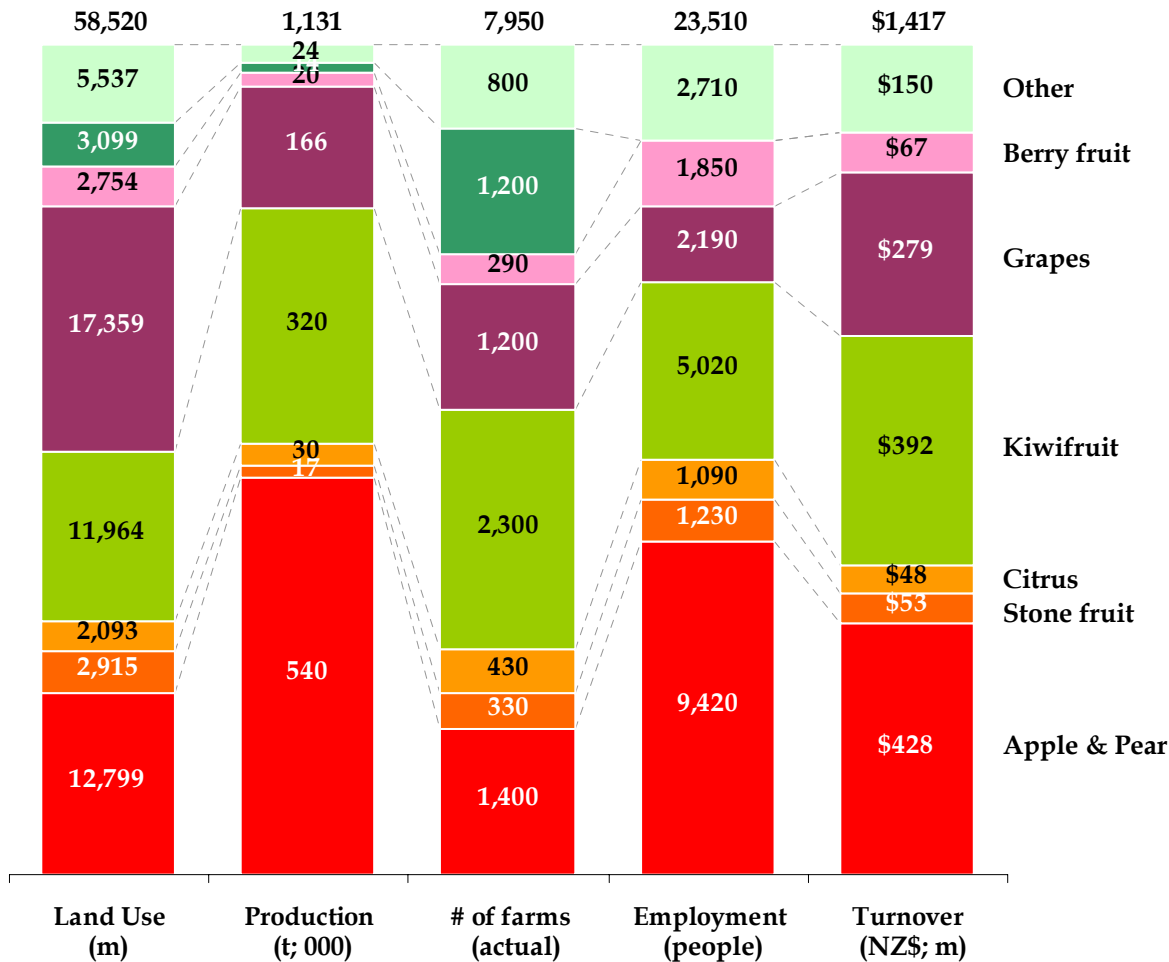
New Zealand seasonal window in global horticulture



# OVERVIEW - FRUIT & NUT HORTICULTURE

Apples, kiwifruit and grapes account for a large part of the fruit & nut sector

Fruit & nut horticulture overview by type (various)



## Discussion Points

- Relative efficiency be sector

## Notes

- Definitions and details available on relevant pages
- Production data understates other as data not collected for all fruit & nuts

# DIRECTIONAL TREND - FRUIT & NUT HORTICULTURE

## Grapes, avocados and “other” fruit & nuts stand out as the long-term winners

Directional trends in fruit & nut horticulture  
(growth or decline)

	Land Use		Prod- uction	# of Farms		Employ- ment	Turnover
	(85-02)	(95-02)	(94-04)	(85-02)	(95-02)	(85-98)	(98-03)
Apple & Pear	▲	▼	=	▲	▼	▲	▲
Stone fruit	▼	▼	▼	▲	▲	▲	▲
Citrus	▼	▲	▼	▲	▼	▲	▲
Kiwifruit	▼	=	▲	▲	▲	▼	▲
Grapes	▲	▲	▲	▲	▲	▲	▲
Berryfruit	▼	▲	▲	▼	▼	▲	▲
Avocados	▲	▲	▲	▲	▲	n/a	n/a
Other	▲	▲	▲	▲	▲	▲	▲

### Discussion Points

- Long-term prognosis for apples

### Notes

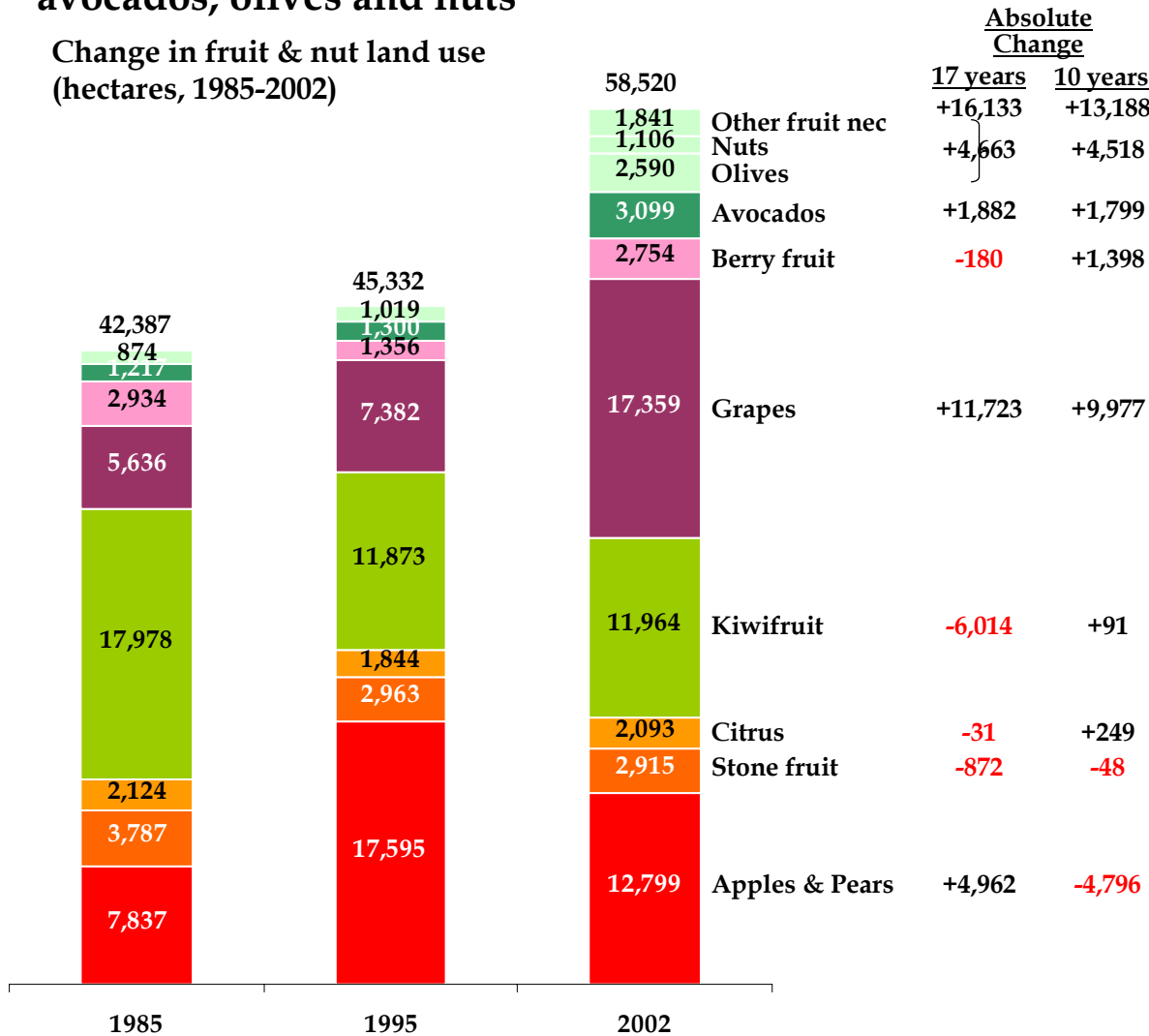
- Differing time periods (e.g. turnover 5 years vs. land use 17 years)
- Use with caution; should be treated as directional; different surveys; different methods; different definitions
- Details available on specific pages



## CHANGE IN LAND USE - FRUIT & NUTS

While total land use for horticulture is up, this is being driven by grapes and other fruit, such as avocados, olives and nuts

Change in fruit & nut land use (hectares, 1985-2002)



	Absolute Change	
	17 years	10 years
Other fruit nec	+16,133	+13,188
Nuts	+4,663	+4,518
Olives		
Avocados	+1,882	+1,799
Berry fruit	-180	+1,398
Grapes	+11,723	+9,977
Kiwifruit	-6,014	+91
Citrus	-31	+249
Stone fruit	-872	-48
Apples & Pears	+4,962	-4,796

### Discussion Points

- Some amount of grapes, olives and nuts would appear to bring new land into horticulture
- Growth of Mediterranean fruit (grapes/olives)
- How do the economics of olive production in New Zealand compare with Spain or Turkey?
- What is the ultimate potential of avocados or the nut industry?

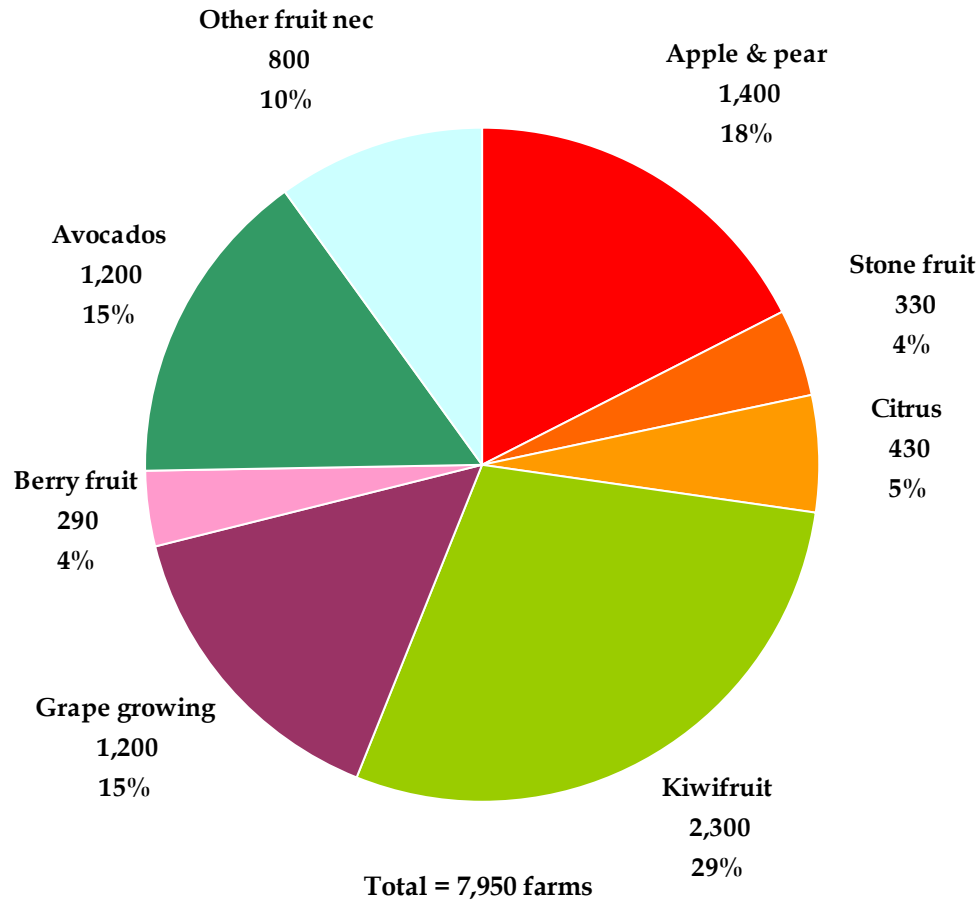
### Notes

- Olives and nuts breakdown unavailable for 1995 or 1985
- Hort Research estimates differ in some cases; HR 2004 estimates Avocados 4,000ha; nuts 1,841ha

## NUMBER OF FARMS BY TYPE - FRUIT & NUT ORCHARDS

There are almost 8,000 fruit orchards in New Zealand, primarily (77%) apples, kiwifruit, grapes and avocados

Number of fruit orchards by type  
(orchards, actual, 2002)



### Discussion Points

- Will the number of apples & pear farms continue to decline?

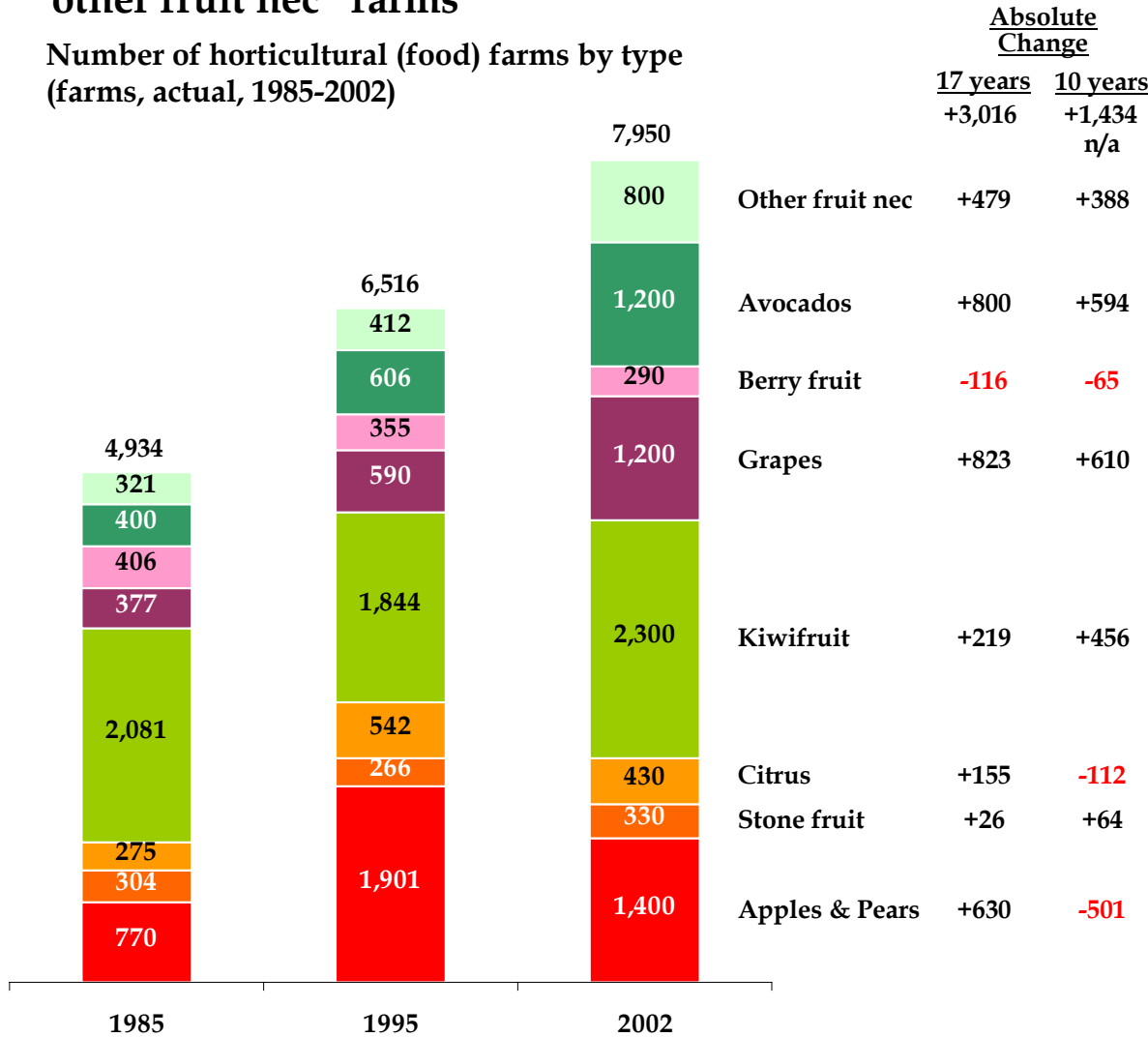
### Notes

- Excludes plant nurseries (1,400) and cut flower and flower seed growing (1,100) as these are not food
- Other fruit nec is not a complete dataset, limited/patchy additional data available; nuts not available

## CHANGE IN NUMBER OF FARMS BY TYPE - FRUIT & NUTS

The number of orchards is growing, driven primarily by more grape, kiwifruit, avocados and “other fruit nec” farms

Number of horticultural (food) farms by type  
(farms, actual, 1985-2002)



Absolute Change	
17 years	10 years
+3,016	+1,434
	n/a

### Discussion Points

- Will the number of apples & pear farms continue to decline?

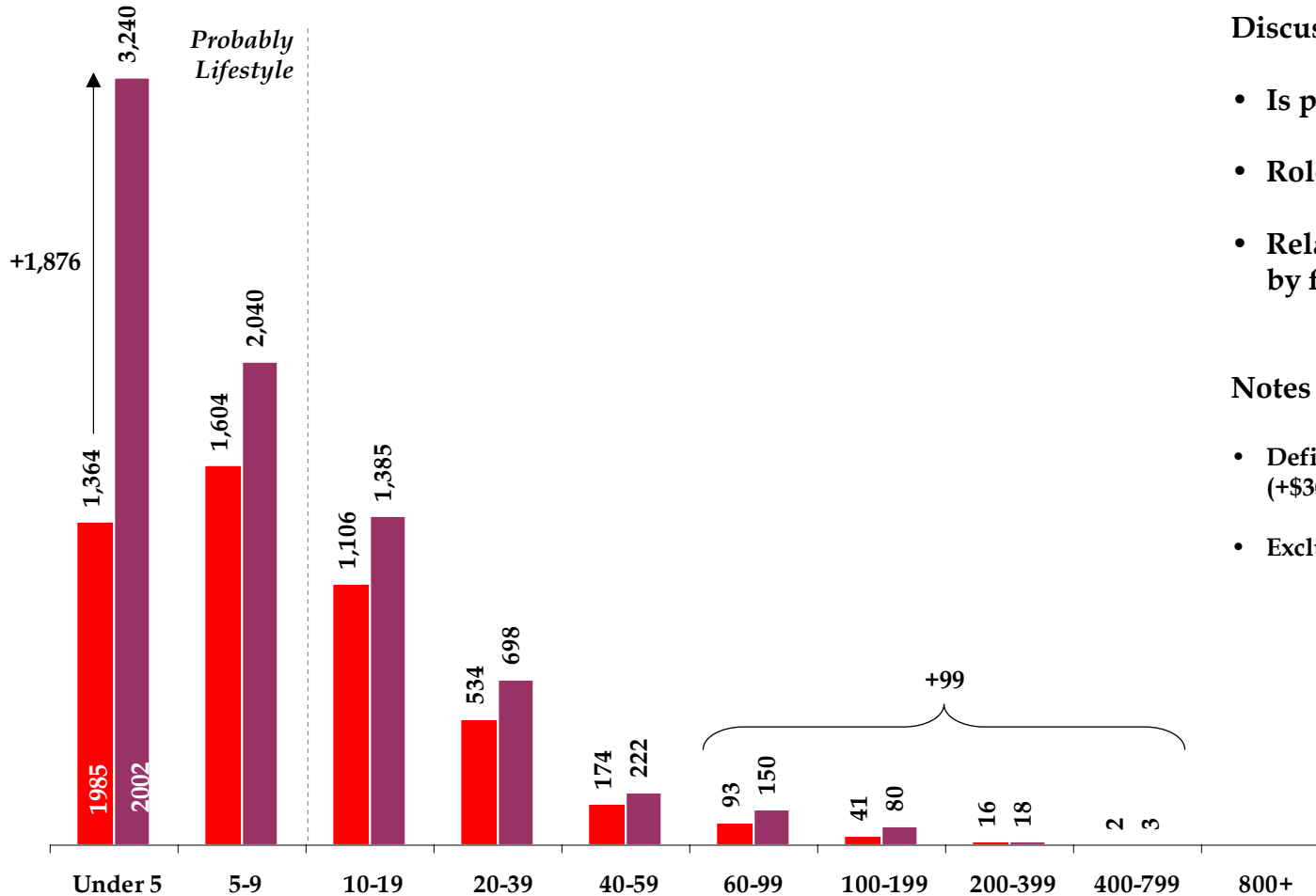
### Notes

- Excludes plant nurseries (1,400) and cut flower and flower seed growing (1,100) as these are not food
- Other fruit nec is not a complete dataset, limited/patchy additional data available; nuts not available

## NUMBER OF ORCHARDS BY SIZE - FRUIT & NUTS

There has been huge growth in the number of fruit farms in the past 17 years, primarily at the un-economic end of the spectrum

Number of horticultural/cropping farms by size  
 (#of farms, by size of farm, hectare, 1985-2002)



### Discussion Points

- Is polarisation taking place?
- Role and impact of lifestyle farms
- Relative impact of economies of scale by farm type

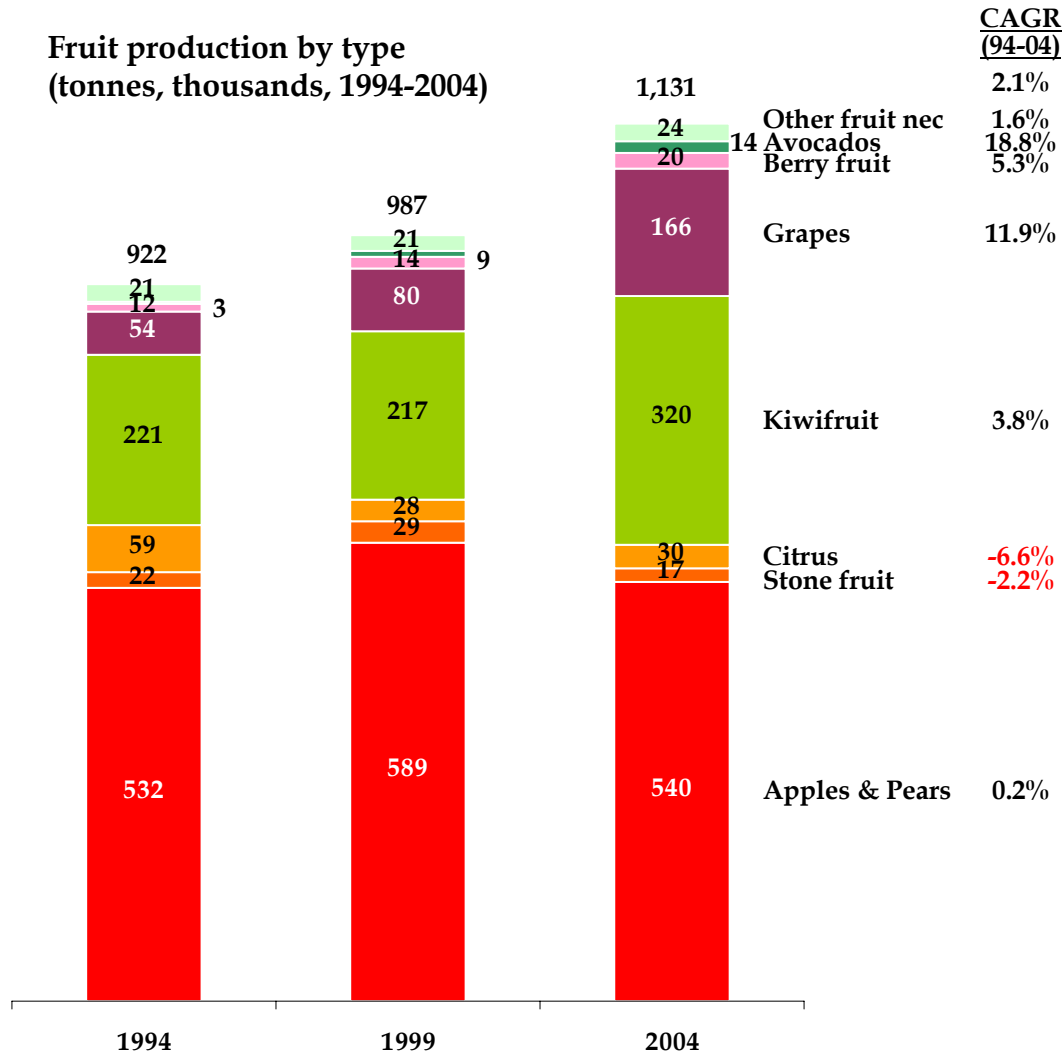
### Notes

- Defined as farms registered for GST purposes (+\$30,000pa)
- Excludes flowers/plant nurseries (2,500)

# FRUIT PRODUCTION

Fruit production is increasing, driven primarily by kiwifruit and grapes

Fruit production by type  
(tonnes, thousands, 1994-2004)



CAGR  
(94-04)

Other fruit nec	1.6%
Avocados	18.8%
Berry fruit	5.3%
Grapes	11.9%
Kiwifruit	3.8%
Citrus	-6.6%
Stone fruit	-2.2%
Apples & Pears	0.2%

## Discussion Points

- Lessons from kiwifruit industry productivity increases (more fruit from same land)

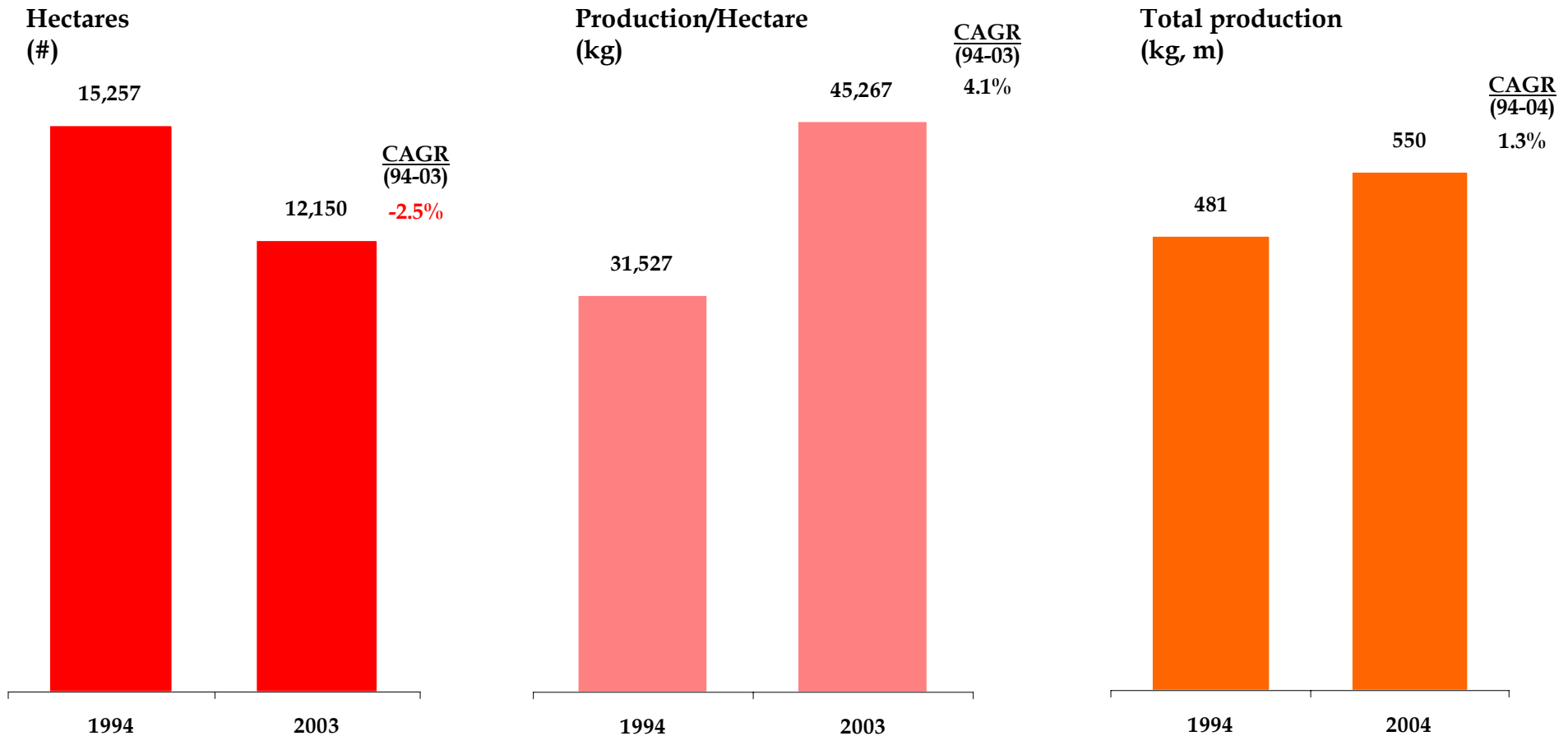
## Notes

- Other fruit understated; no data available on nuts, olives and many other fruit (not collected)
- Data based on MAF estimates and is not statistically robust (eg stone fruit)

## APPLES - PRODUCTION INDICATORS

While the area devoted to apples is declining, the yield is increasing, leading to slightly growing production

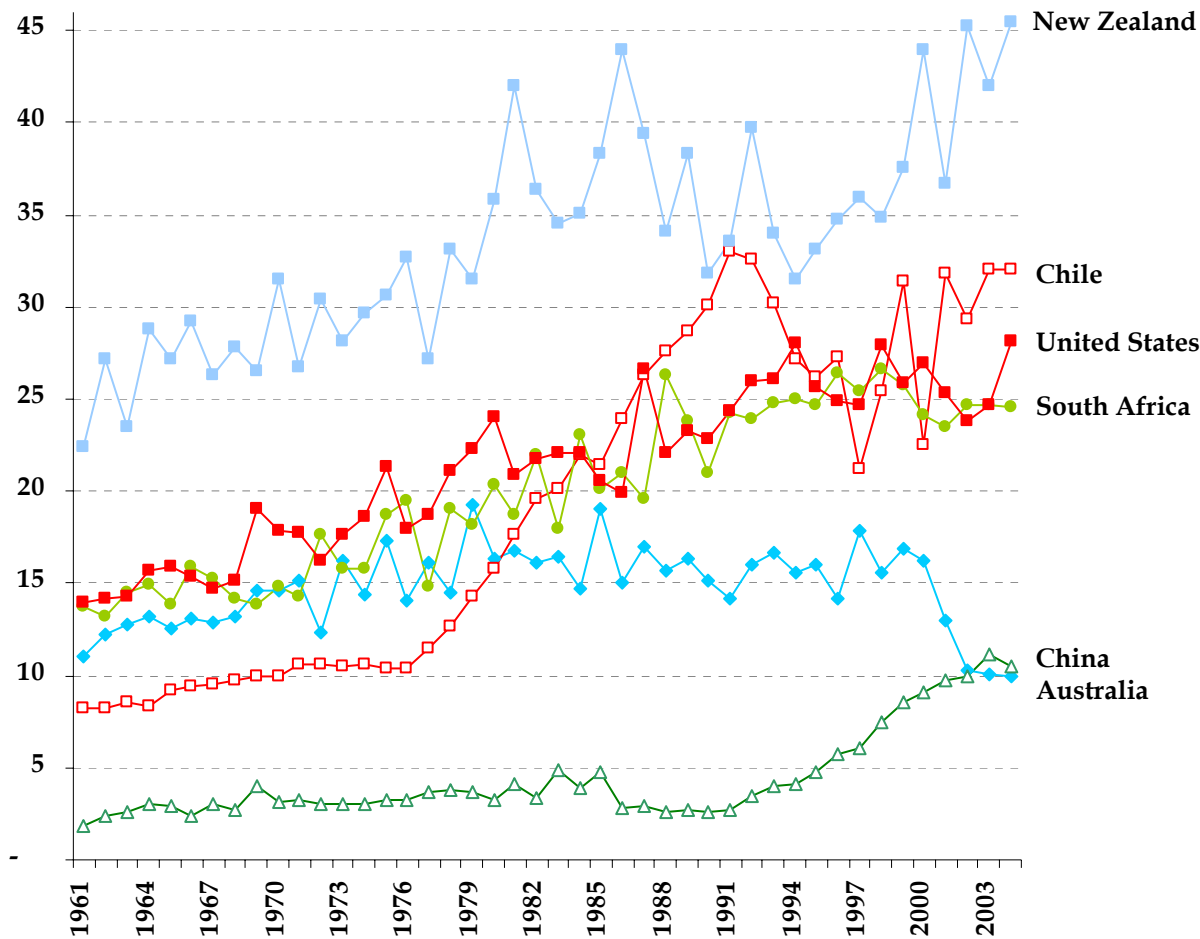
Key apple productivity indicators  
(1994-2004)



# HIGH APPLE YIELDS PER HECTARE

## New Zealand gets world class apple yields per hectare

Apple production per hectare by select country (tonnes; 1961-2004)



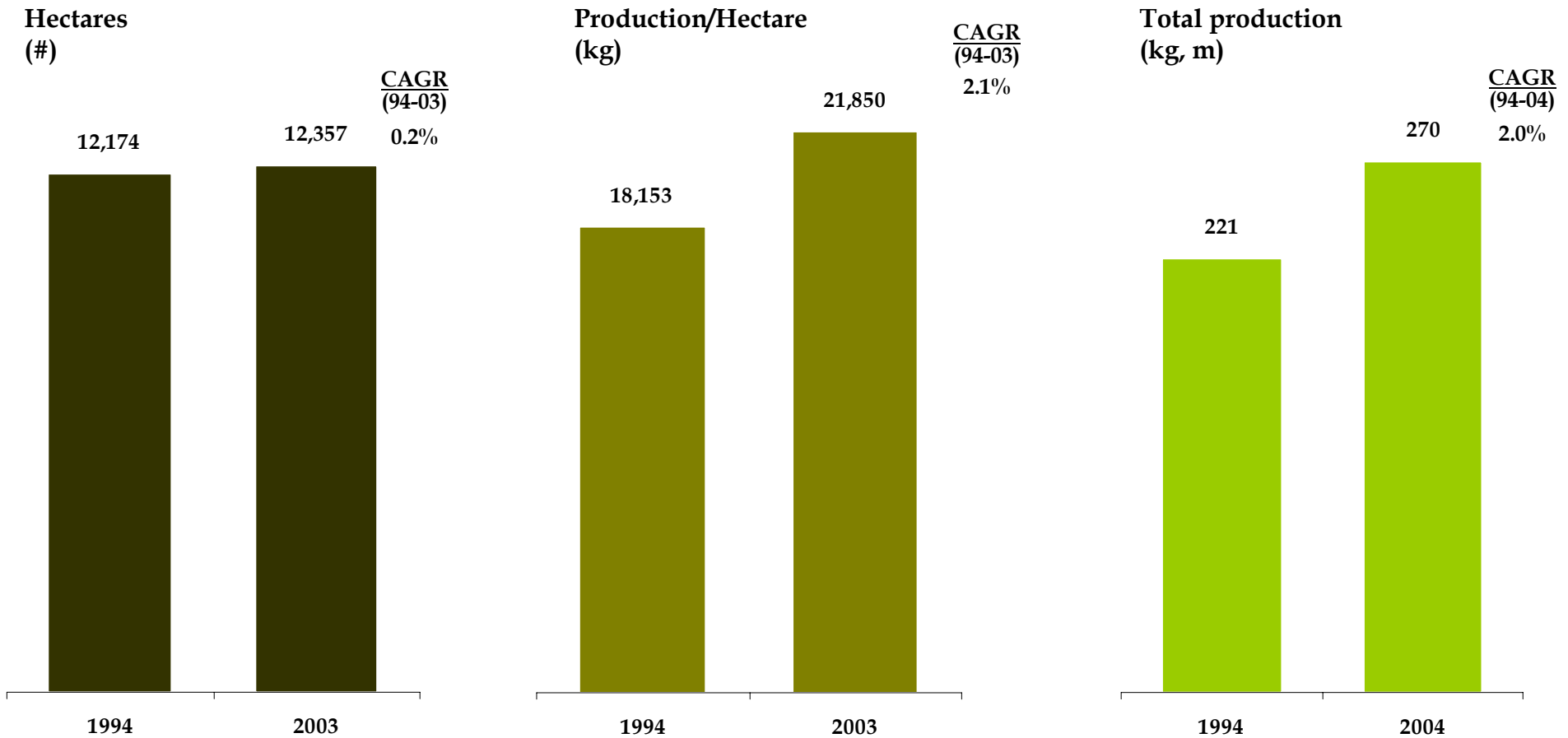
### Discussion Points

- We get good yields; which part of the equation is causing current industry turmoil?
- Implied that NZ area coming out of production is low yielding
- China now gets better yields than Australia

# KIWIFRUIT - PRODUCTION INDICATORS

Kiwifruit farmers are improving their productivity by getting more fruit off the same land

Key kiwifruit productivity indicators  
(1994-2004)

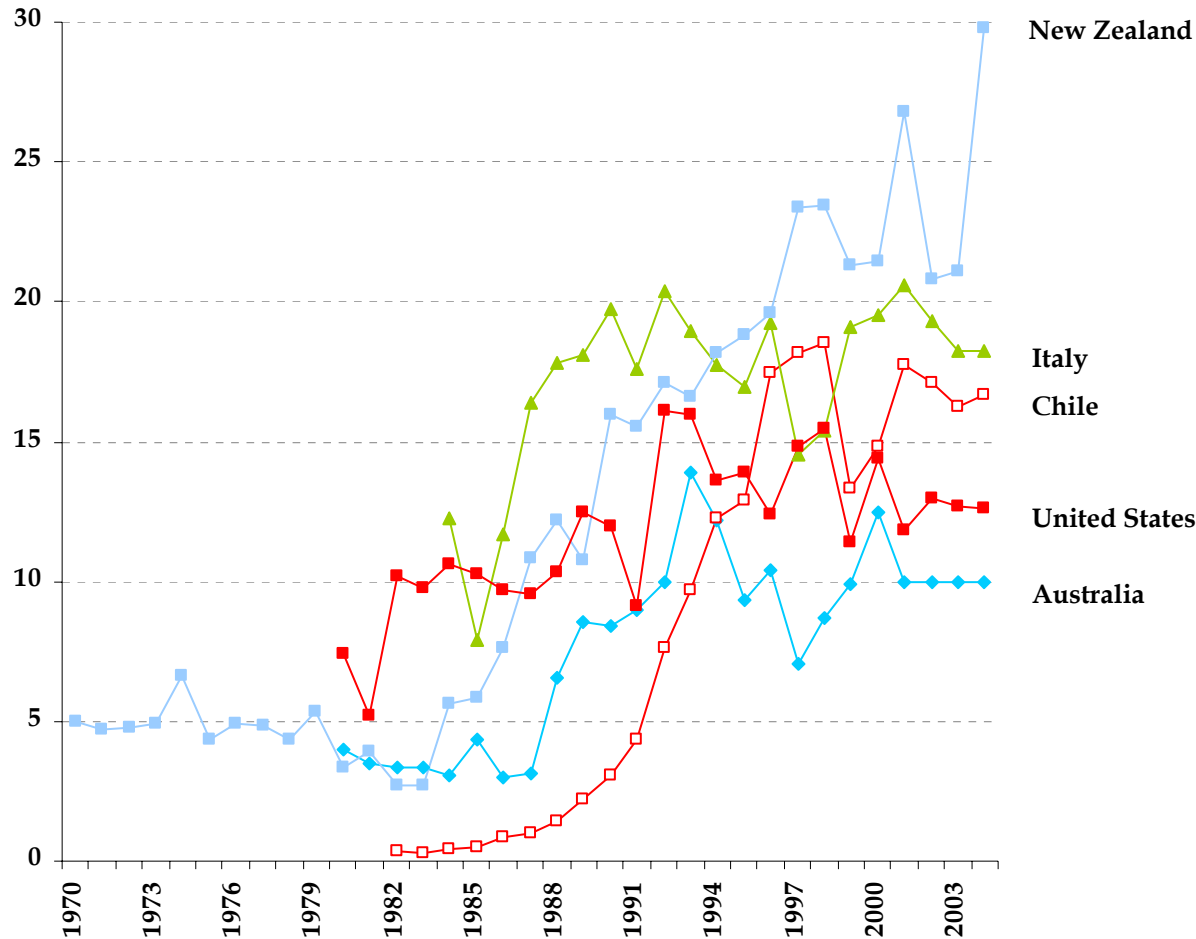




# HIGH KIWIFRUIT YIELDS PER HECTARE

## New Zealand leads the world in kiwifruit yields per hectare

Kiwifruit production per hectare by select country (tonnes; 1961-2004)



### Discussion Points

- Can we continue to improve yields at this rate?

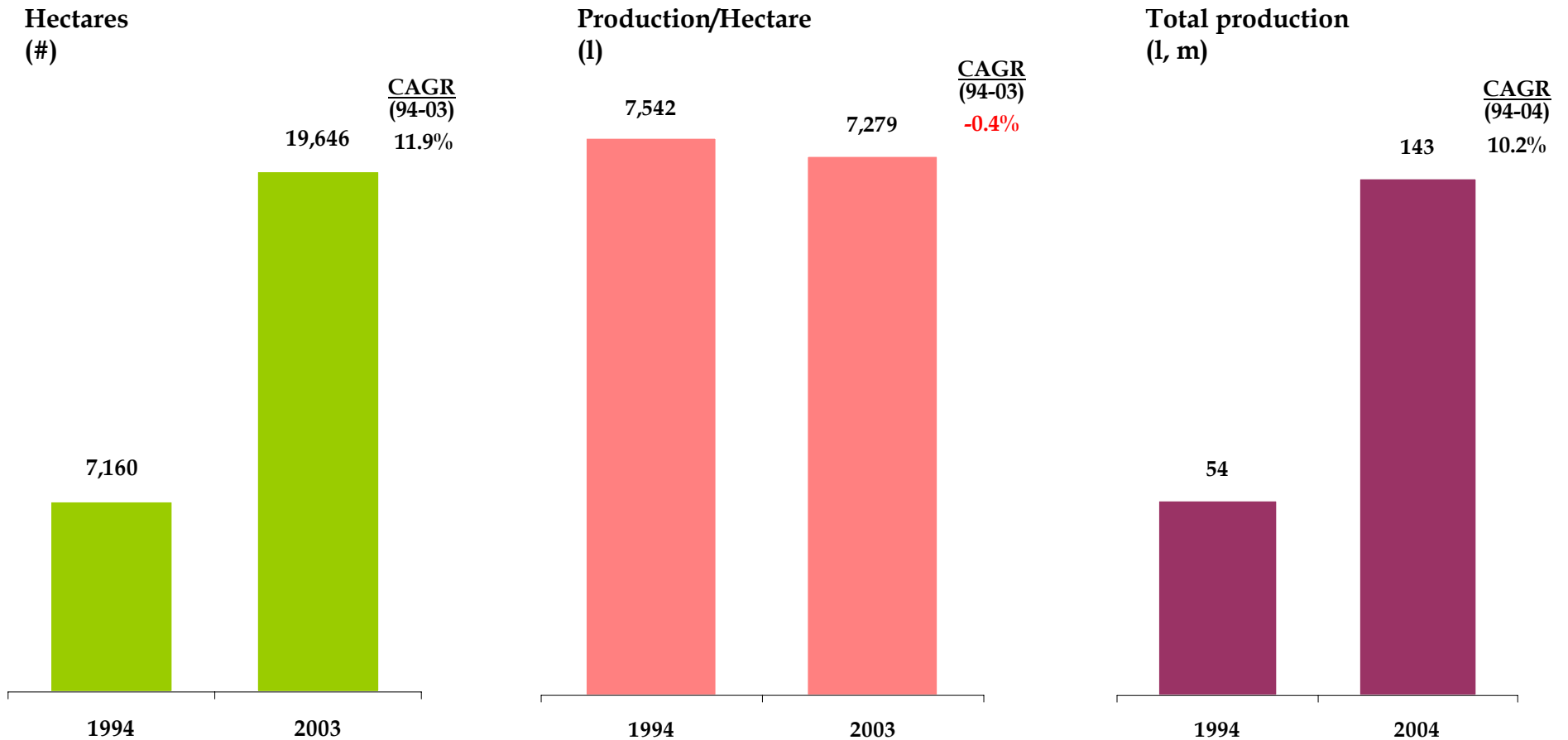
### Notes

- No comparable China data available

# GRAPE - PRODUCTION INDICATORS

New Zealand wine production is increasing dramatically, land is being converted to grapes rather than any increase in productivity

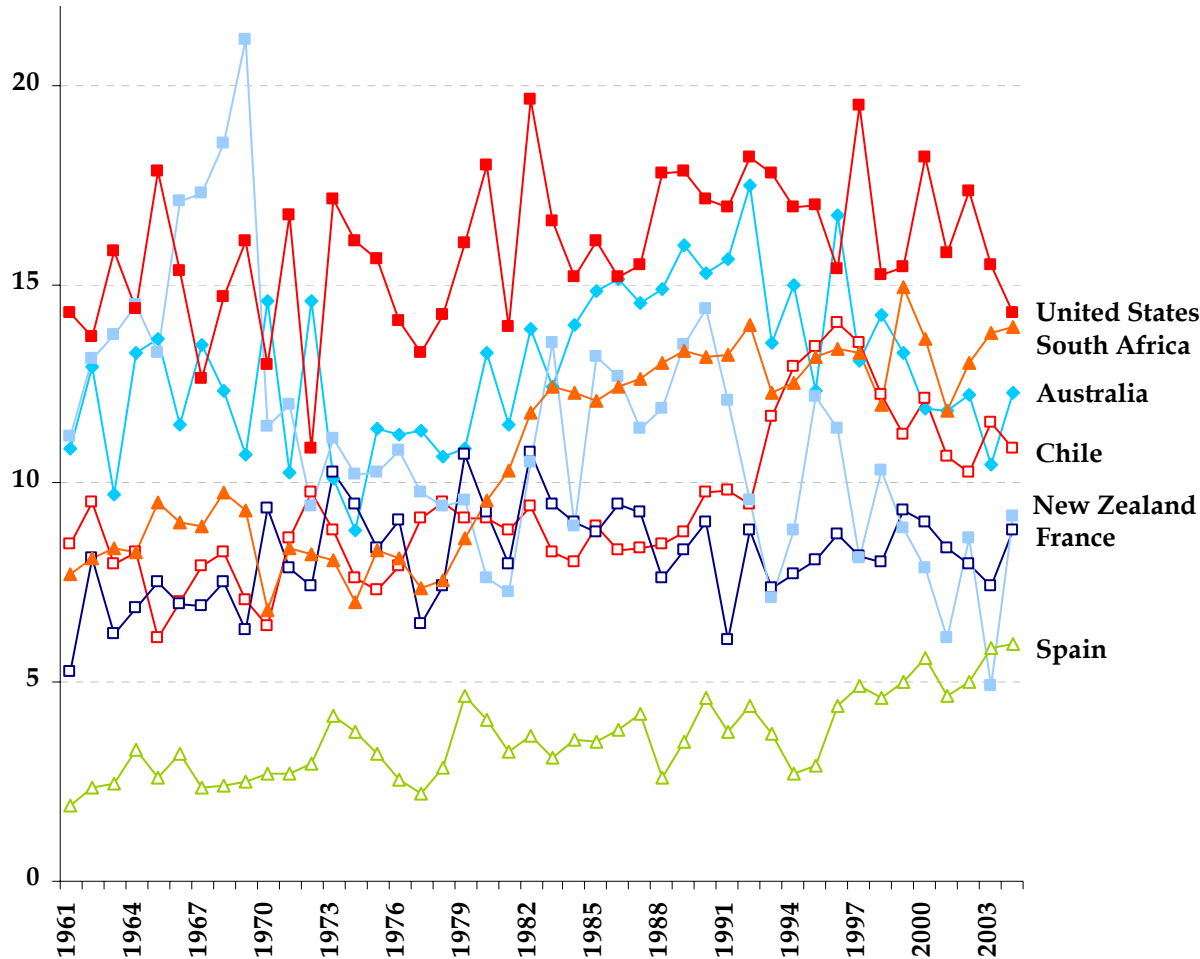
Key wine productivity indicators  
(1994-2004)



# MID-RANGE GRAPE YIELDS PER HECTARE

## New Zealand gets a grape yield in the middle of the range

Grape production per hectare by select country (tonnes; 1961-2004)



### Discussion Points

- New Zealand yield trending down due to new plantings depressing yields?
- Old World vs. New World
- High year-to-year variability in New Zealand yields

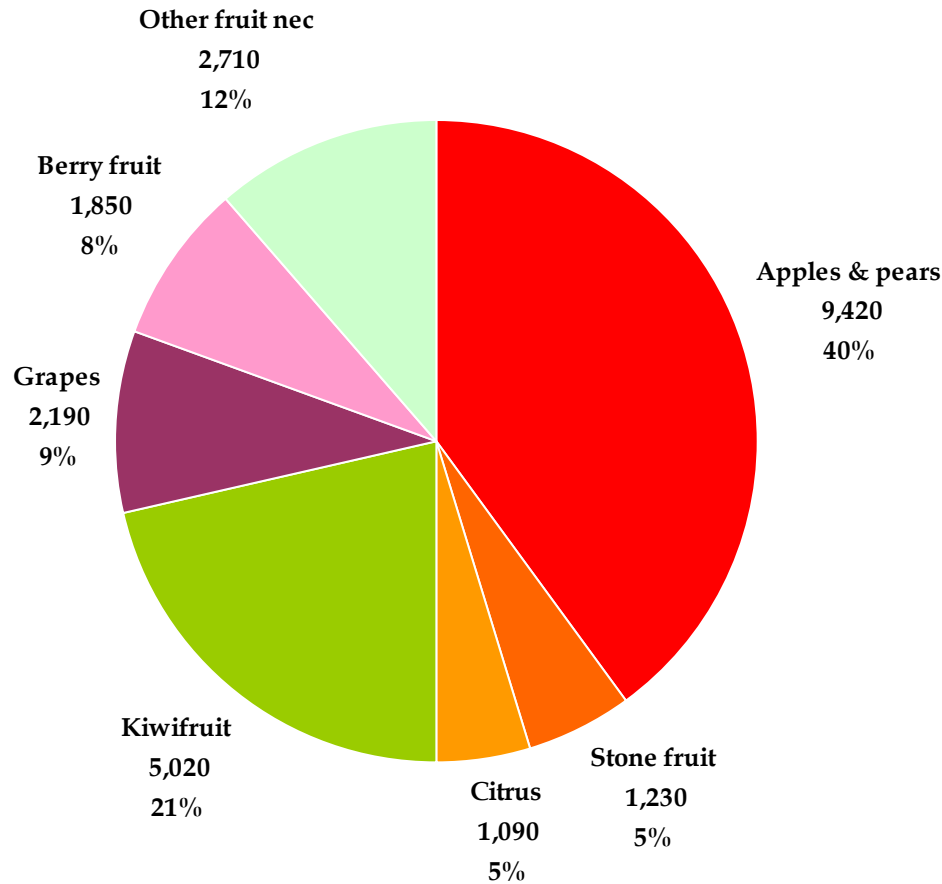
### Notes

- Includes table grapes (inseparable at source)

# FARM EMPLOYMENT - ORCHARDS

## Apples and kiwifruit account for 61% of orchard employment

Number of people employed on orchards by type  
(people, actual, 1998)



Total = 23,510 people

### Discussion Points

- Relative labour intensity of apples/pears

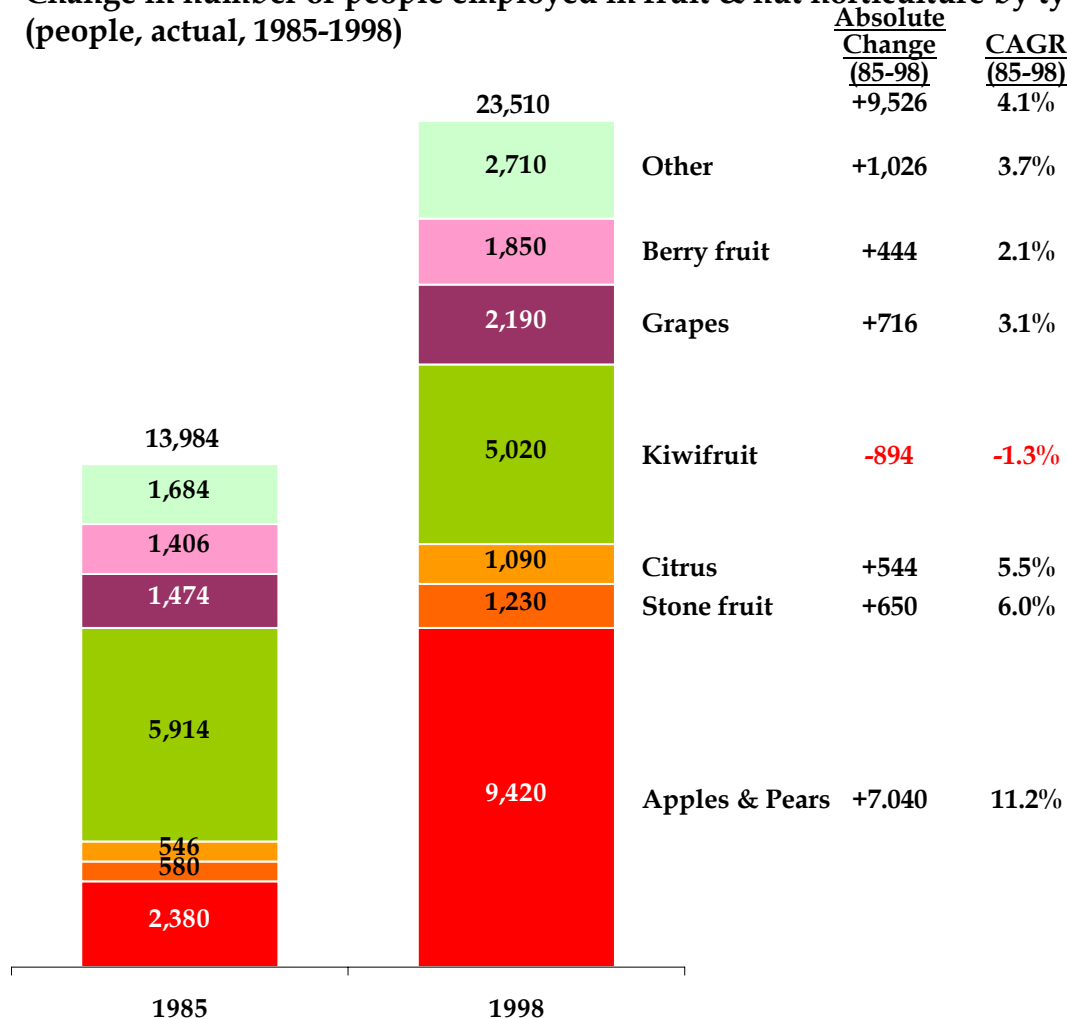
### Notes

- Total people not FTE
- Farm employment survey conducted only twice in last 18 years (1998, 2004)
- Uses 1998 data as this incorporated working proprietors (not measured in 2004 survey)
- May not capture total pool of seasonal labour; no measure of unpaid working family members (35,000 across livestock & horticulture in 1985 survey)
- Does not include flowers/plant nursery employment (8,100). Avocados included in Other fruit nec

# CHANGE IN FRUIT & NUT EMPLOYMENT

## Overall employment in fruit & nut horticulture is up slightly

Change in number of people employed in fruit & nut horticulture by type (people, actual, 1985-1998)



### Discussion Points

- Why the huge growth in apple and pear orchard employment?

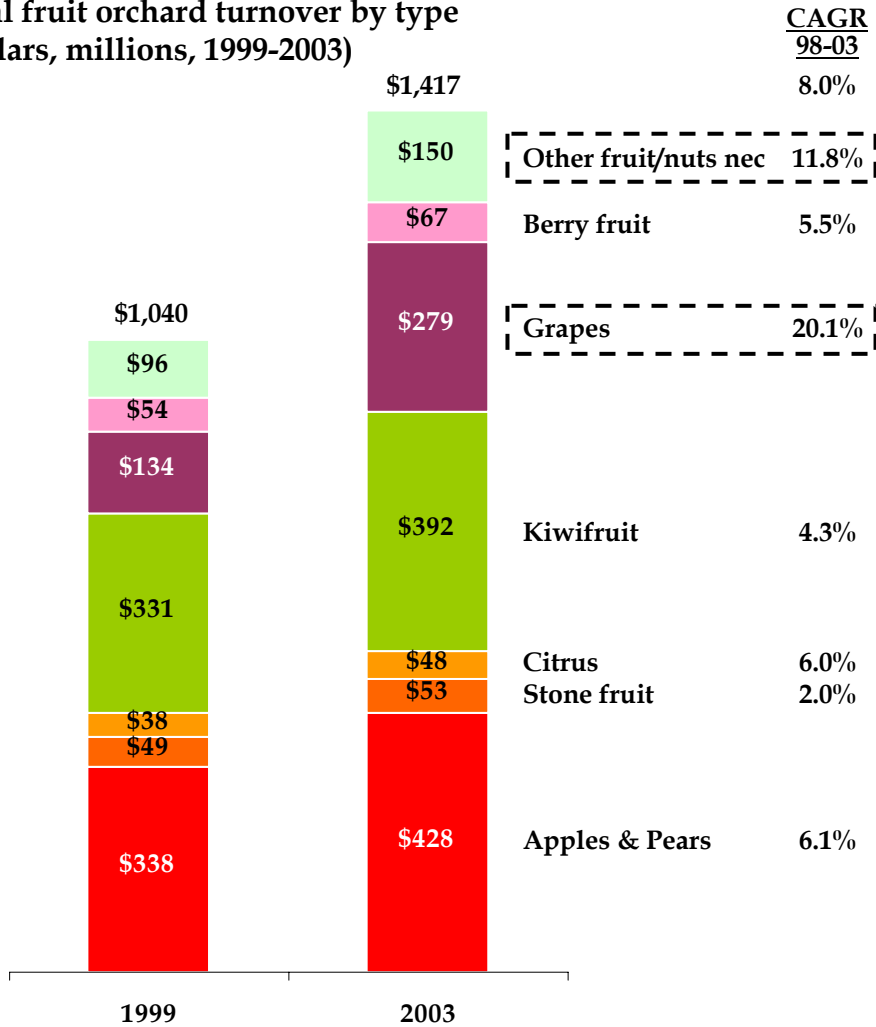
### Notes

- Total people not FTE
- Farm employment survey conducted only twice in last 18 years (1998, 2004)
- Uses 1998 data as this incorporated working proprietors (not measured in 2004 survey)
- May not capture total pool of seasonal labour
- No measure of unpaid working family members (35,000 across livestock & horticulture in 1985 survey)

# ORCHARD TURNOVER GROWTH - FRUIT & NUTS

Orchard turnover is up in the past four years, especially in grapes and other fruit

Total fruit orchard turnover by type  
(dollars, millions, 1999-2003)



### Discussion Points

- Strong growth of grapes and other fruit

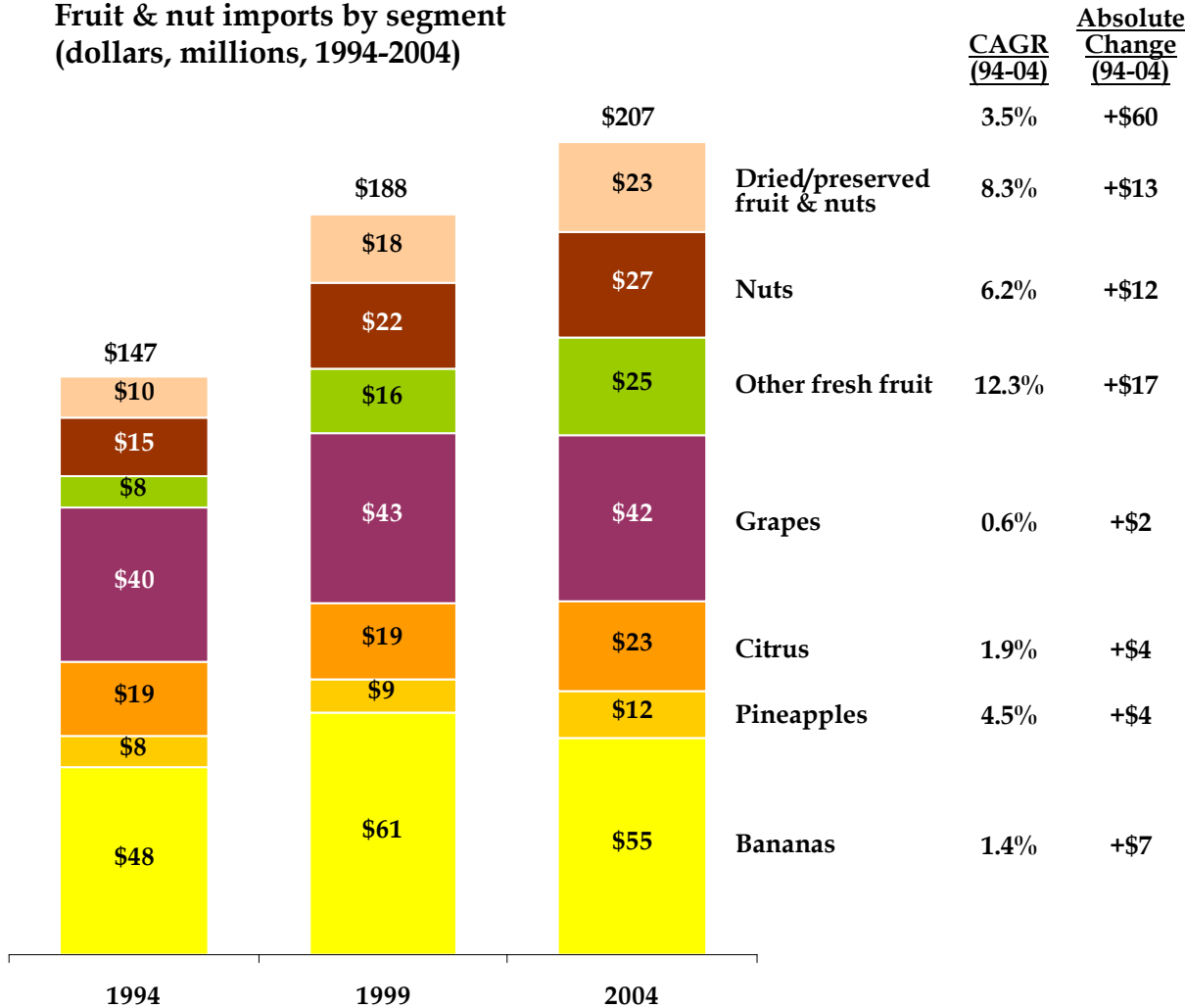
### Notes

- AES 2004 data not yet available
- Comparable data not available for prior periods
- Methodology defines farm by primary income source
- Actual dollars; not inflation adjusted

# FRUIT & NUT IMPORTS BY SEGMENT

Fruit and nut imports are primarily tropical or counter-seasonal

Fruit & nut imports by segment  
(dollars, millions, 1994-2004)



## Discussion Points

- Growth of nuts and preserved fruit

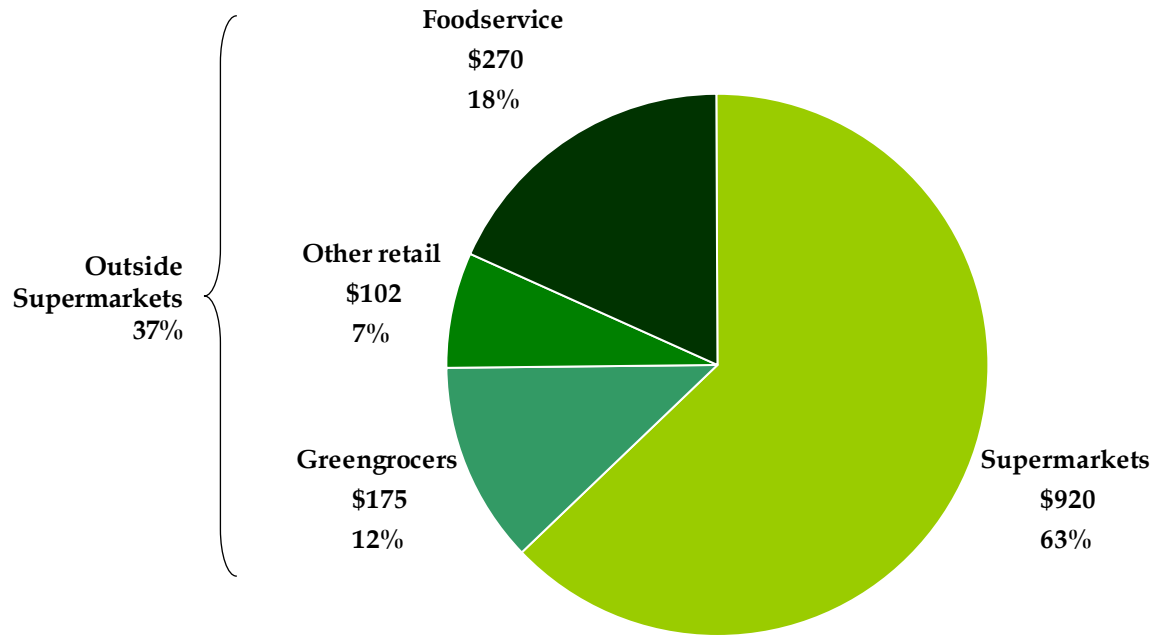
## Notes

- Classification:
  - Bananas (HS0803)
  - Pineapples (HS0804) includes a small amount of dates and figs
  - Citrus (HS0805)
  - Grapes (HS0806)
  - Other fresh fruit (HS0807-0810)
  - Nuts (US0801-0802)
  - Dried/preserved fruit & fruit/nut mixtures (HS0811-0814)
  - Does not include processed products (e.g. muesli bars)

## DOMESTIC MARKET - FRUIT & VEGETABLES

The domestic market for fruit & vegetables has wholesale purchases of \$1,468 million, of which \$690m is fruit

Wholesale purchases of fruit & vegetables by segment  
(dollars, millions, 2004)



Total = \$1,468 million  
of which 47% fruit = \$690m

### Discussion Points

- Relative importance of non-supermarket channels

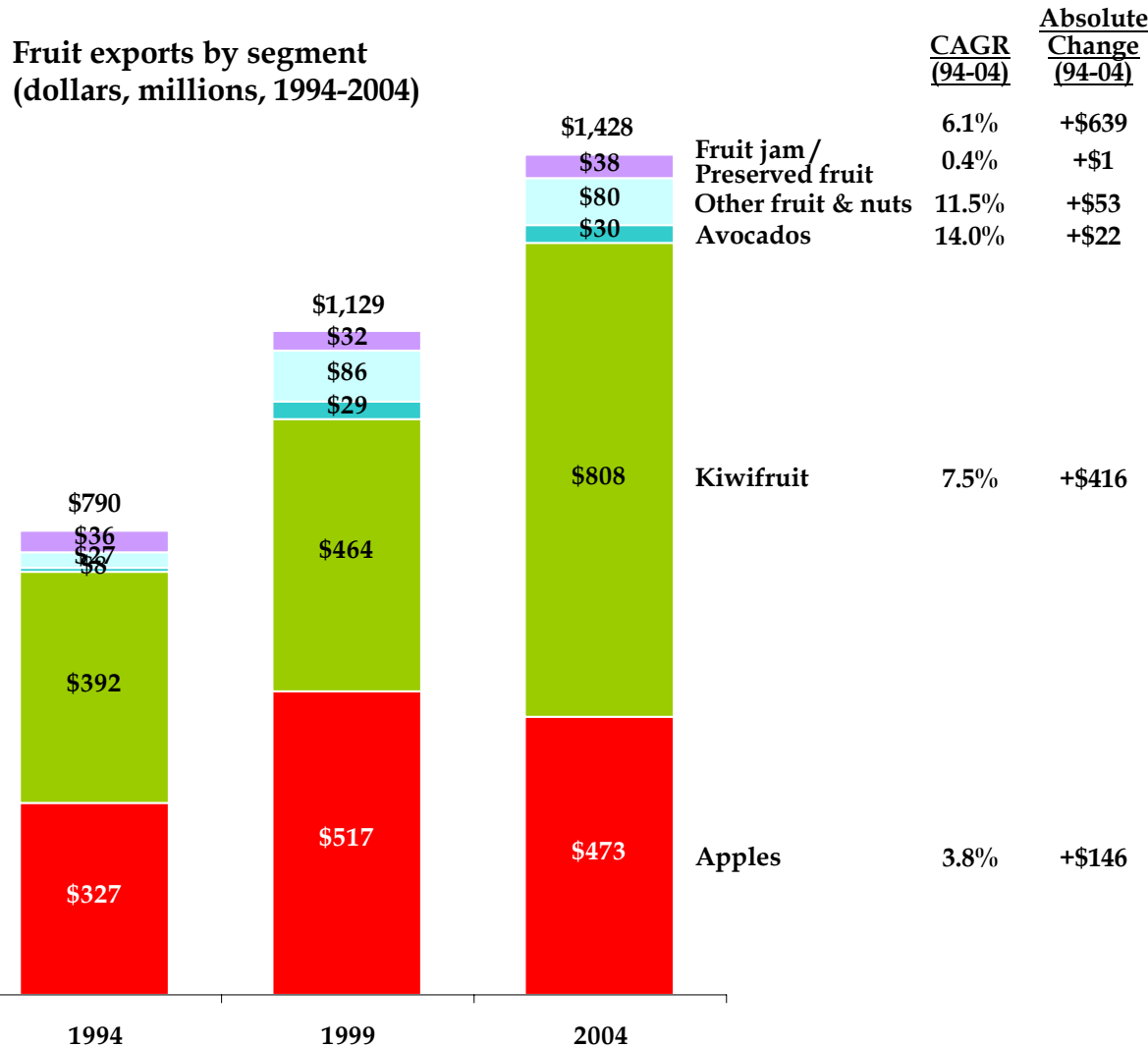
### Notes

- Aggregate market is 47% fruit and 53% vegetables
- Represents wholesale purchases of fruit & vegetables (only) at cost to segment not retail sales to consumers (e.g. Greengrocers have turnover of \$283m of which 75.6% is f&v on which they took an average gross margin of 22% for a wholesale cost of \$175m)
- Excludes ingredient purchases (e.g. by soup manufacturers)



# FRUIT EXPORTS BY SEGMENT

Fruit exports are still highly reliant on apples and kiwifruit



## Discussion Points

- Reliance on apples & kiwifruit
- Decline of apples

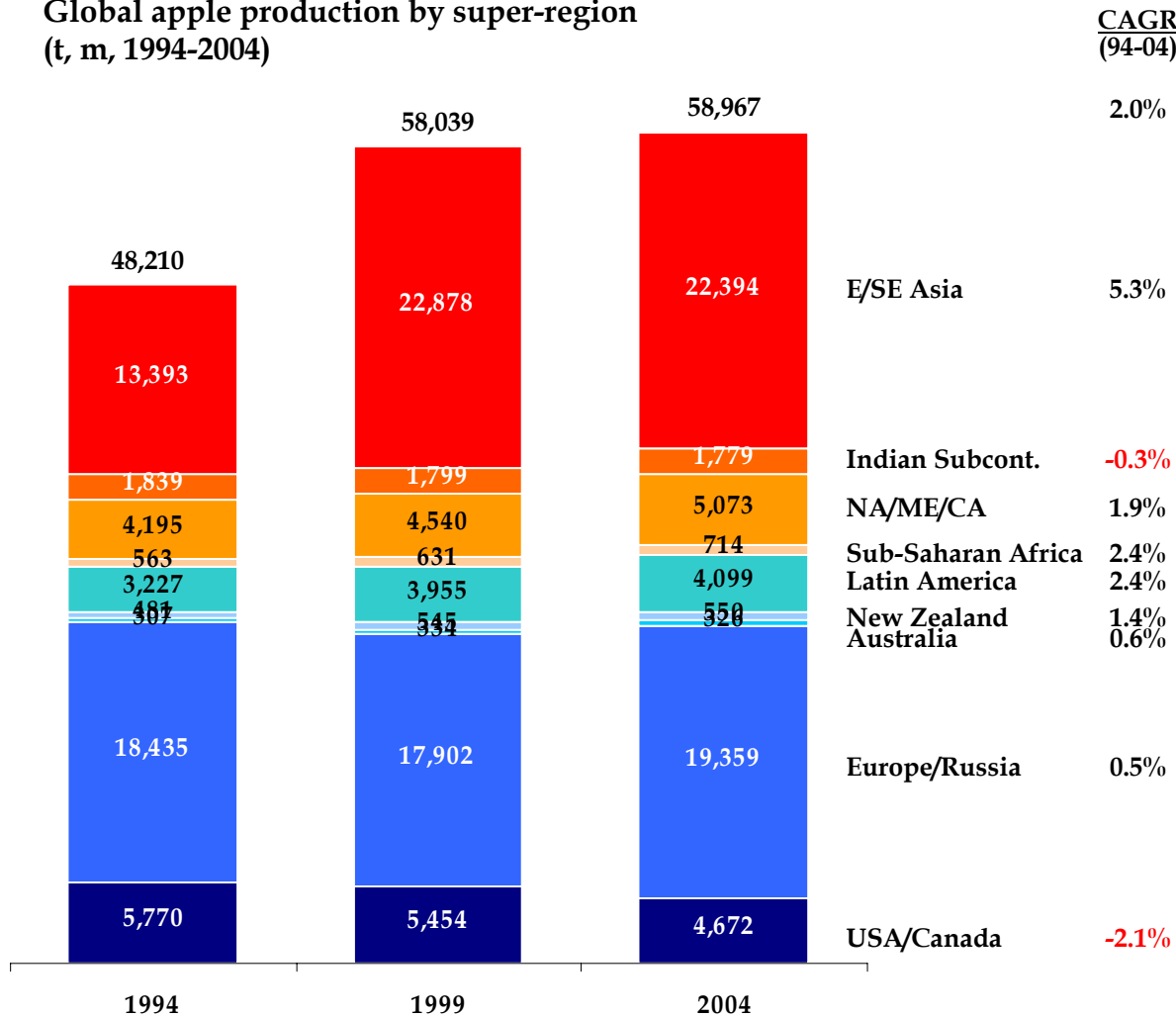
## Notes

- Revised classifications from draft document
  - Fruit & vegetables now includes preserved f&v (HS2001-2008), but excludes Wine (HS2204-2206)

# APPLE PRODUCTION VOLUME BY REGION

New Zealand is a relatively minor apple producer losing global market share to Asian fruit

Global apple production by super-region  
(t, m, 1994-2004)



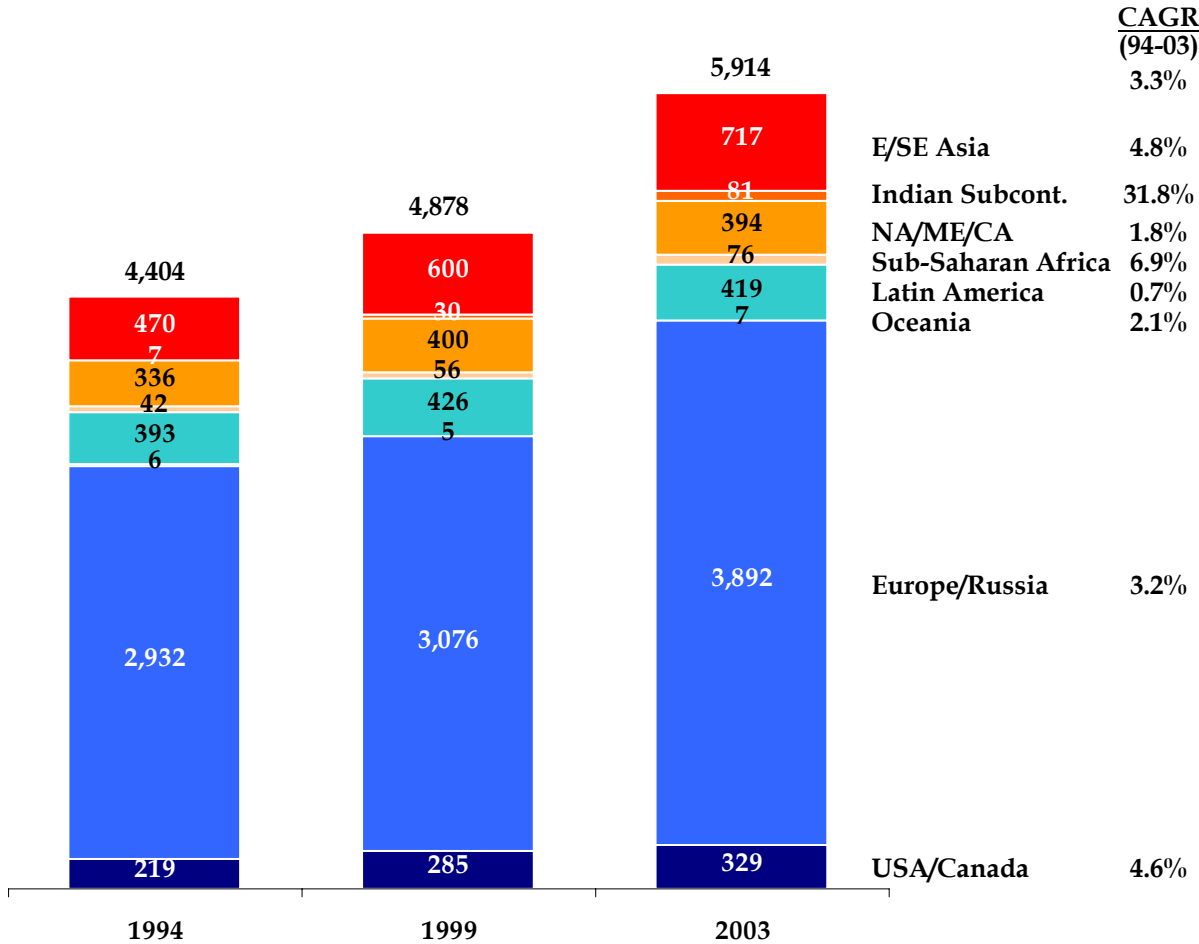
## Discussion Points

- What capacity does China have to export apples? What quality is the fruit?

# APPLE IMPORT VOLUME BY REGION

## Europe is the major global apple importer

Global apple imports by super-region  
(t, m, 1994-2003)



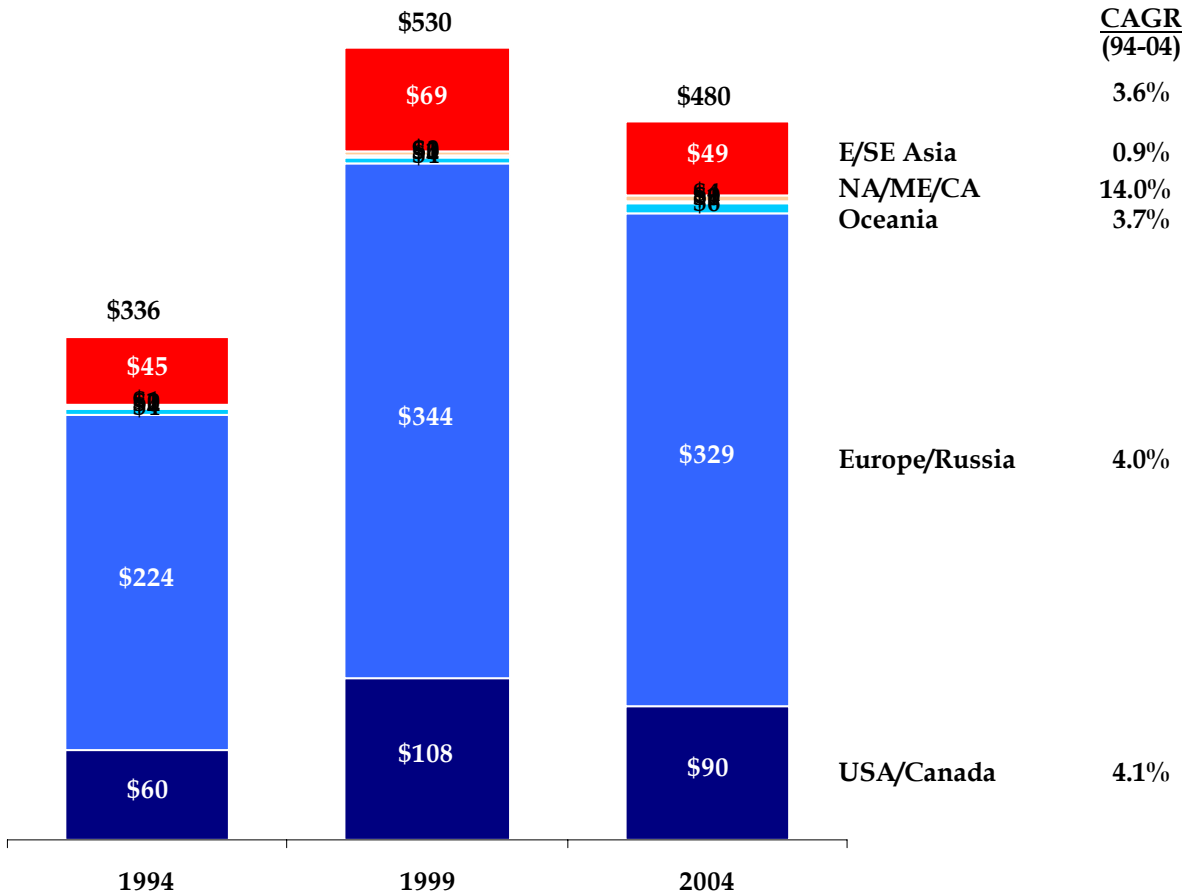
### Discussion Points

- What is the long term outlook for apple consumption in Europe?

# NEW ZEALAND APPLE EXPORT VALUE BY DESTINATION

While apple export sales are up over the past decade, they have declined in the past five years

New Zealand apple export value by destination  
(NZ\$, m, 1994-2004)



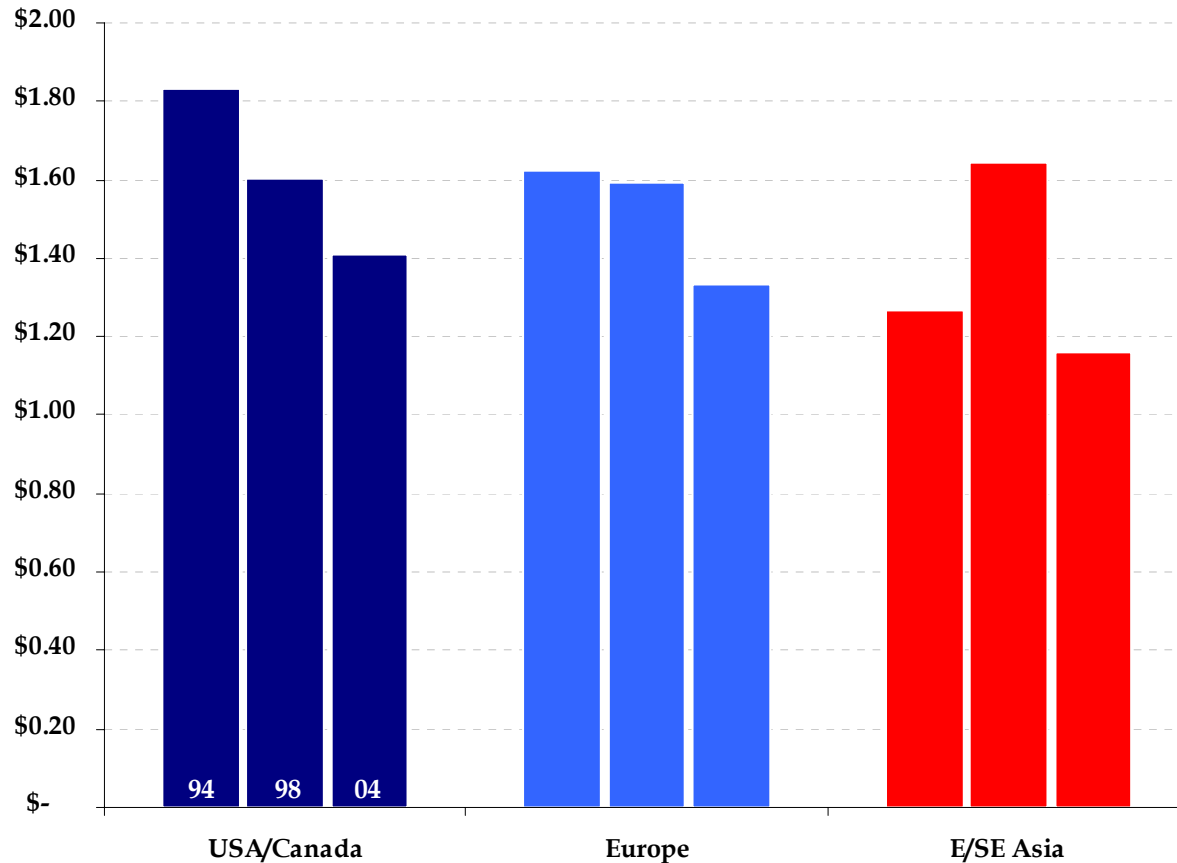
## Discussion Points

- Why are apple sales falling?

# NEW ZEALAND APPLE EXPORT VALUE PER KILO BY DESTINATION

## New Zealand export apple prices are falling around the world

New Zealand apple export value per kg by destination  
(NZ\$, 1994-2004)



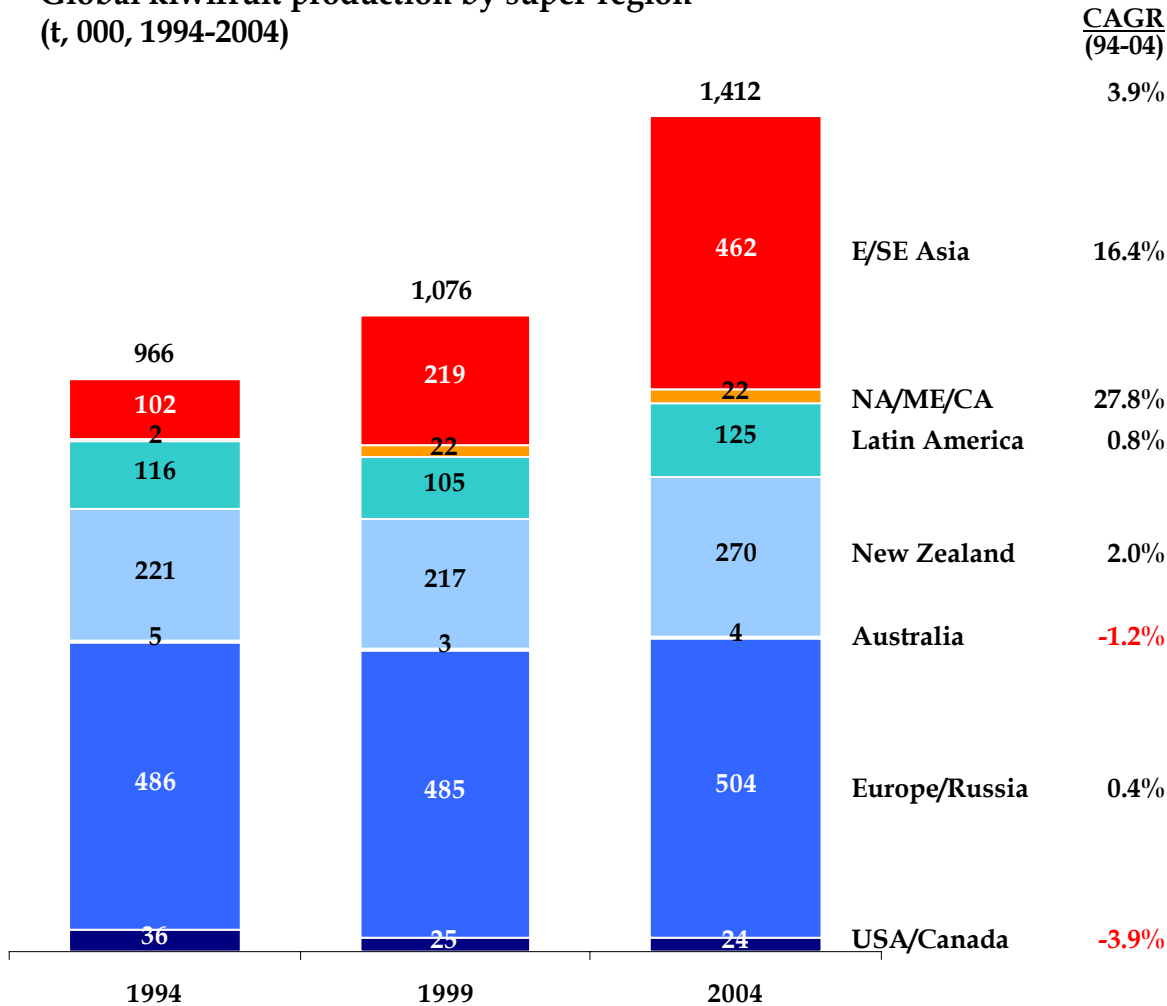
### Discussion Points

- Why are apple prices falling?

# KIWIFRUIT PRODUCTION VOLUME BY REGION

While New Zealand created the kiwifruit industry, it is now the third largest producing region

Global kiwifruit production by super-region  
(t, 000, 1994-2004)



### Discussion Points

- China is the home of the Chinese Gooseberry (57,500ha vs. 12,357ha in NZ); at what production volume will China export significant quantities?
- Why isn't kiwifruit production growing significantly outside China given its low global per capita consumption?
- Why isn't fruit production growing in Europe? or Latin America?

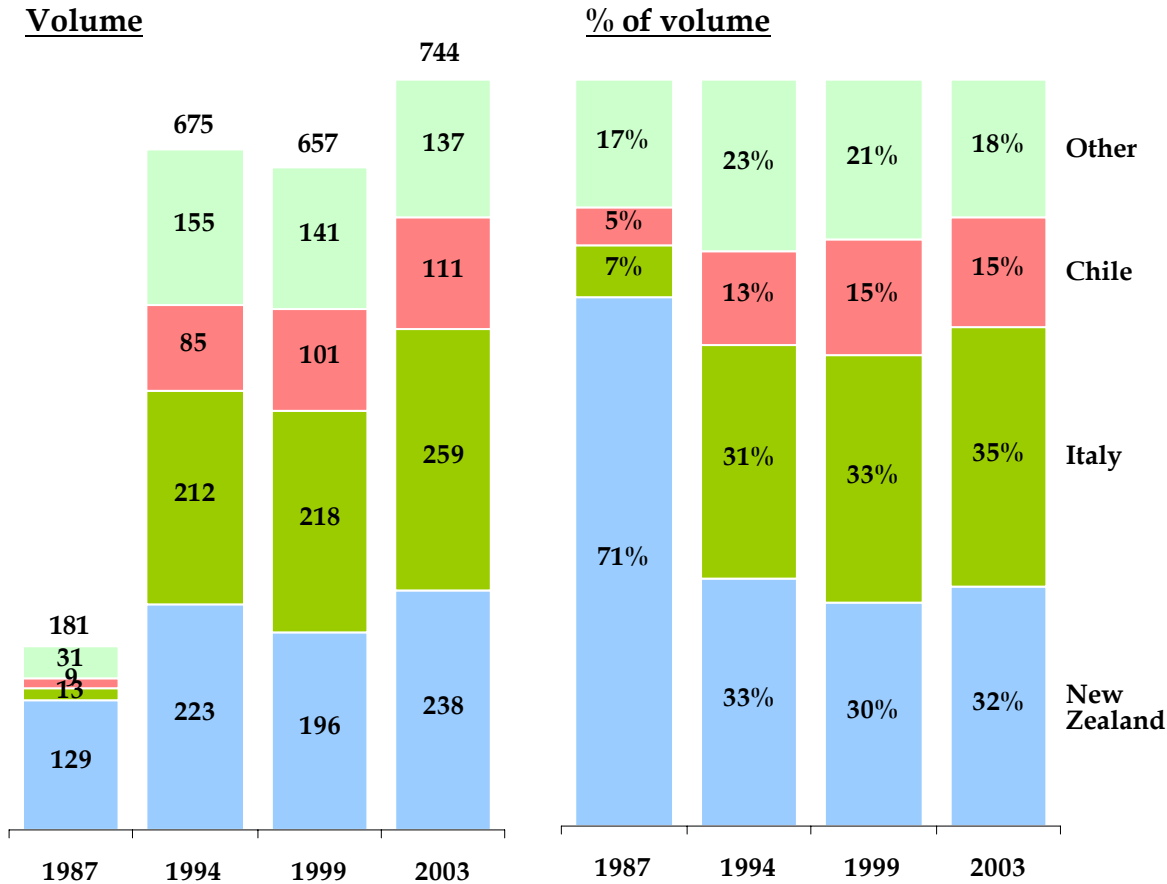
### Notes

- There are multiple different sources and estimates of global kiwifruit production which do not always agree
- Zespri believes Asian (specifically Chinese) production is lower (~300Mt)

# KIWIFRUIT EXPORTS REGION

## Three countries account for over 80% of kiwifruit exports

Global kiwifruit export volume by select country  
(t, 000, 1987-2003)



### Discussion Points

- Have we reached a stable state?

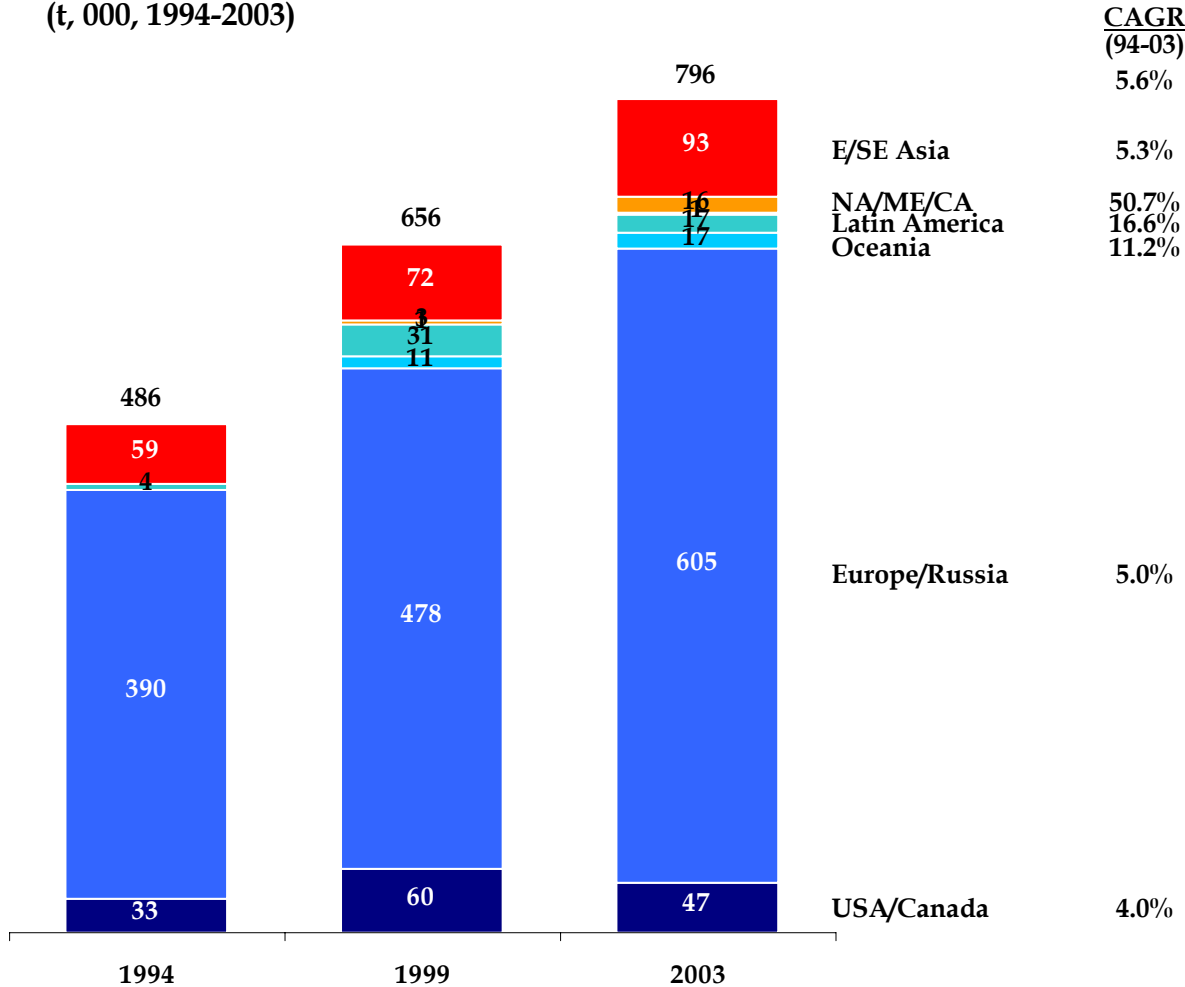
### Notes

- There are multiple different sources and estimates of global kiwifruit exports which do not always agree; we welcome revised data

# KIWIFRUIT IMPORT VOLUME BY REGION

## Europe is the major global kiwifruit importer

Global kiwifruit imports by super-region  
(t, 000, 1994-2003)



### Discussion Points

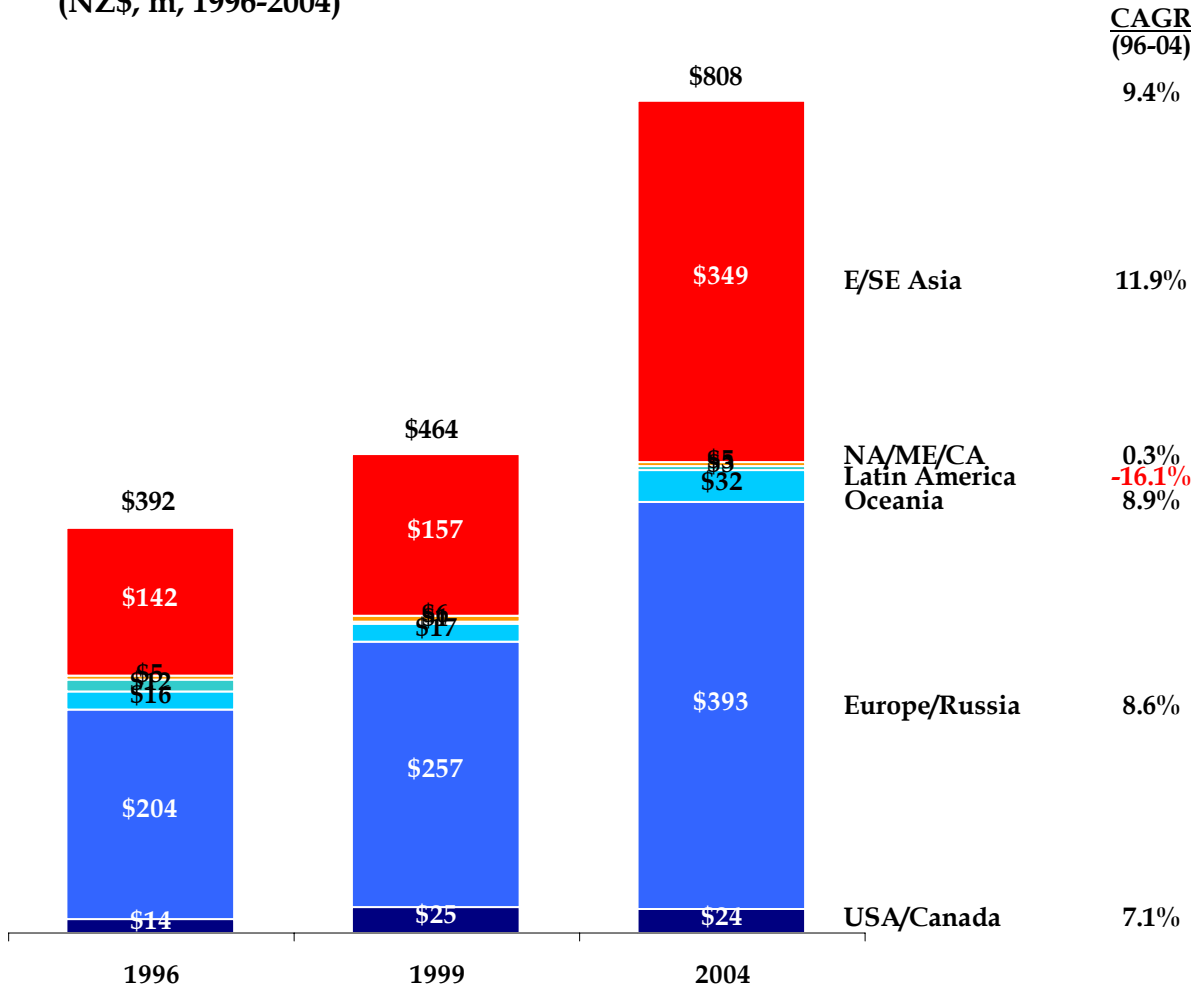
- What is driving the growth of imports in the Arabic world and Latin America?



# NEW ZEALAND KIWIFRUIT EXPORT VALUE BY DESTINATION

The value of New Zealand kiwifruit exports are growing strongly, with Europe and Asia accounting for the bulk of sales

New Zealand kiwifruit export value by destination  
(NZ\$, m, 1996-2004)



### Discussion Points

- How sustainable is the recent value growth? Will this rate of growth continue?

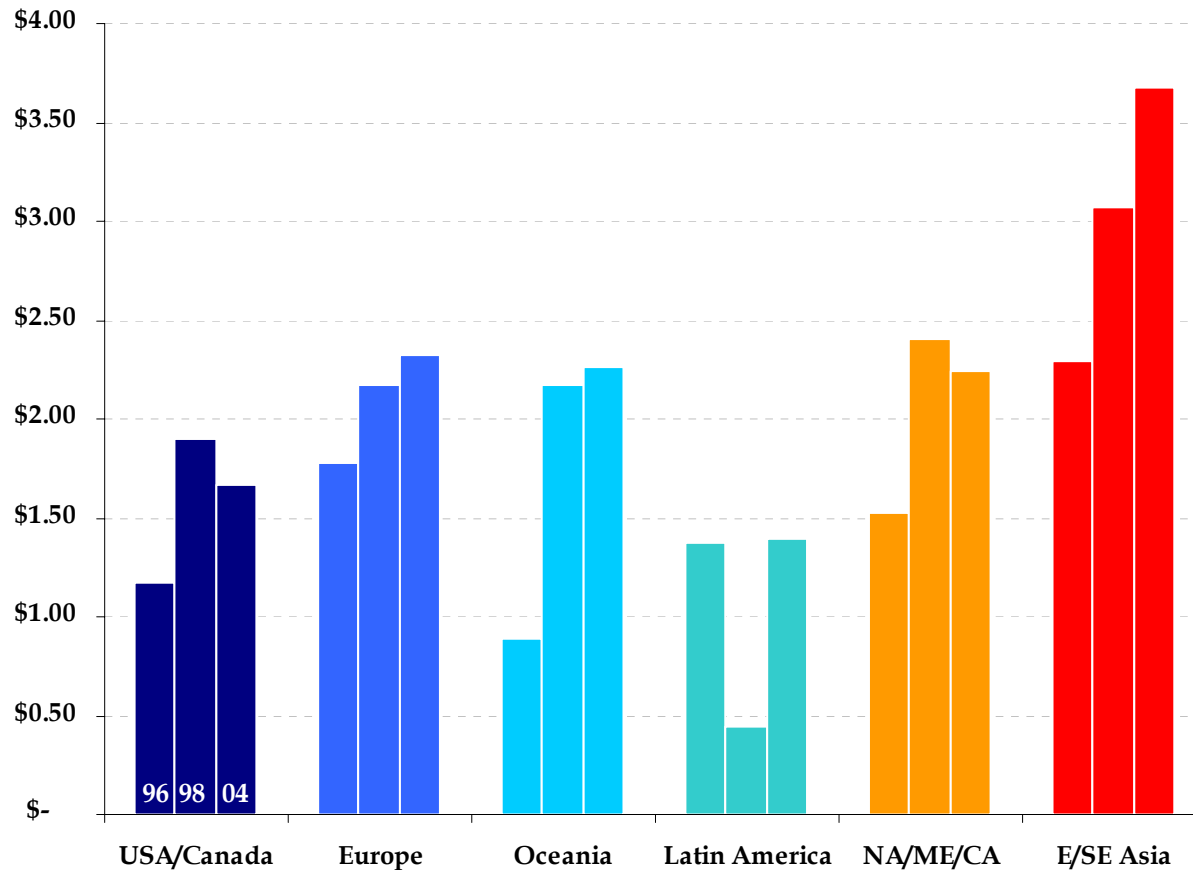
### Notes

- Uses 1996-2004 data as prior to 1996 customs data classifies kiwifruit within "fruit nesoi, fresh"

# NEW ZEALAND KIWIFRUIT EXPORT VALUE PER KILO BY DESTINATION

## New Zealand gets dramatically better returns for kiwifruit in Asia than the rest of the world

New Zealand kiwifruit export value per kg by destination (NZ\$, 1996-2004)



### Discussion Points

- Why does Asia (Japan) pay significantly more than anywhere else for fruit?
- Why is the relative gap widening (vs. Europe)? How sustainable is this situation?

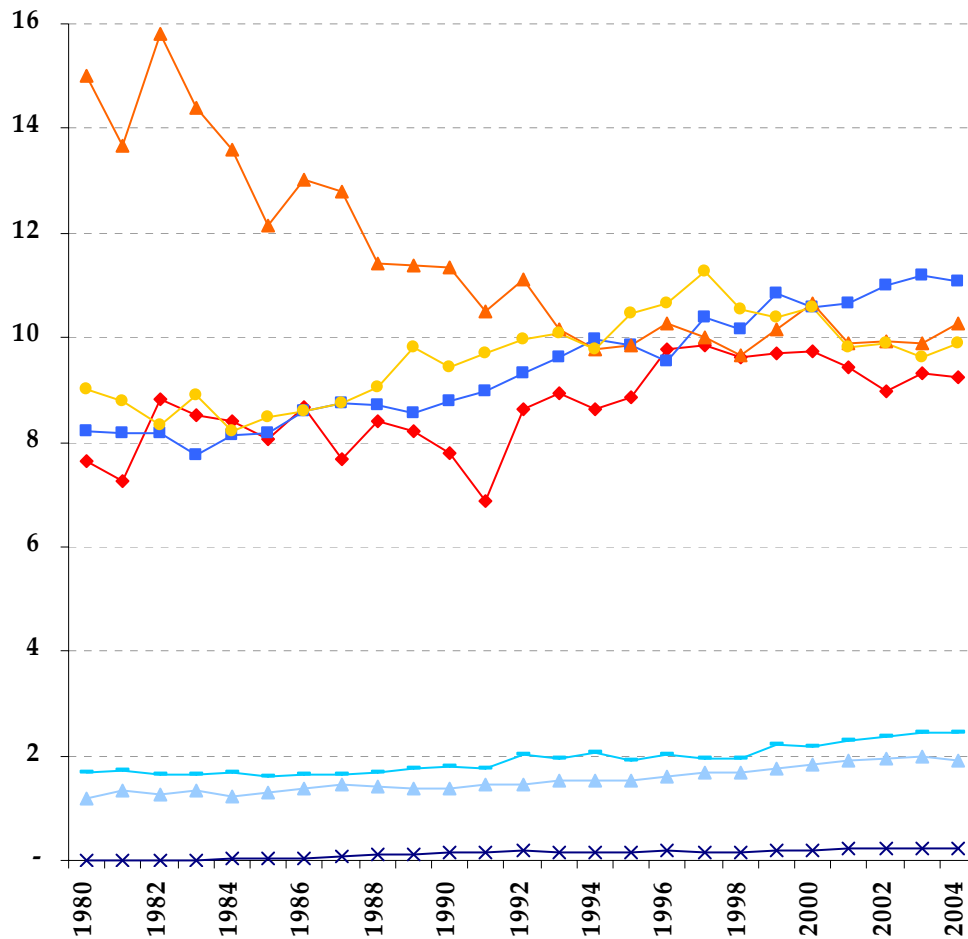
### Notes

- Uses 1996-2004 data as prior to 1996 customs data classifies kiwifruit within "fruit nesoi, fresh"

# GLOBAL PER CAPITA SELECT FRUIT CONSUMPTION

Global kiwifruit consumption growth has slowed dramatically; the continued growth of global banana consumption appears to be at the relative expense of temperate fruit

Global per capita fruit consumption (all forms) by select product (kg/capita, 1980-2004)



CAGR  
(80-94)    CAGR  
(94-04)

Bananas	1.3%	1.4%
Grapes	-3.0%	0.5%
Oranges	0.6%	0.1%
Apples	0.9%	0.7%
Peaches & Nect.	1.4%	1.7%
Lemons & Limes	1.9%	2.3%
Kiwifruit	27.0%	3.6%

## Discussion Points

- Why did kiwifruit consumption stop growing rapidly?

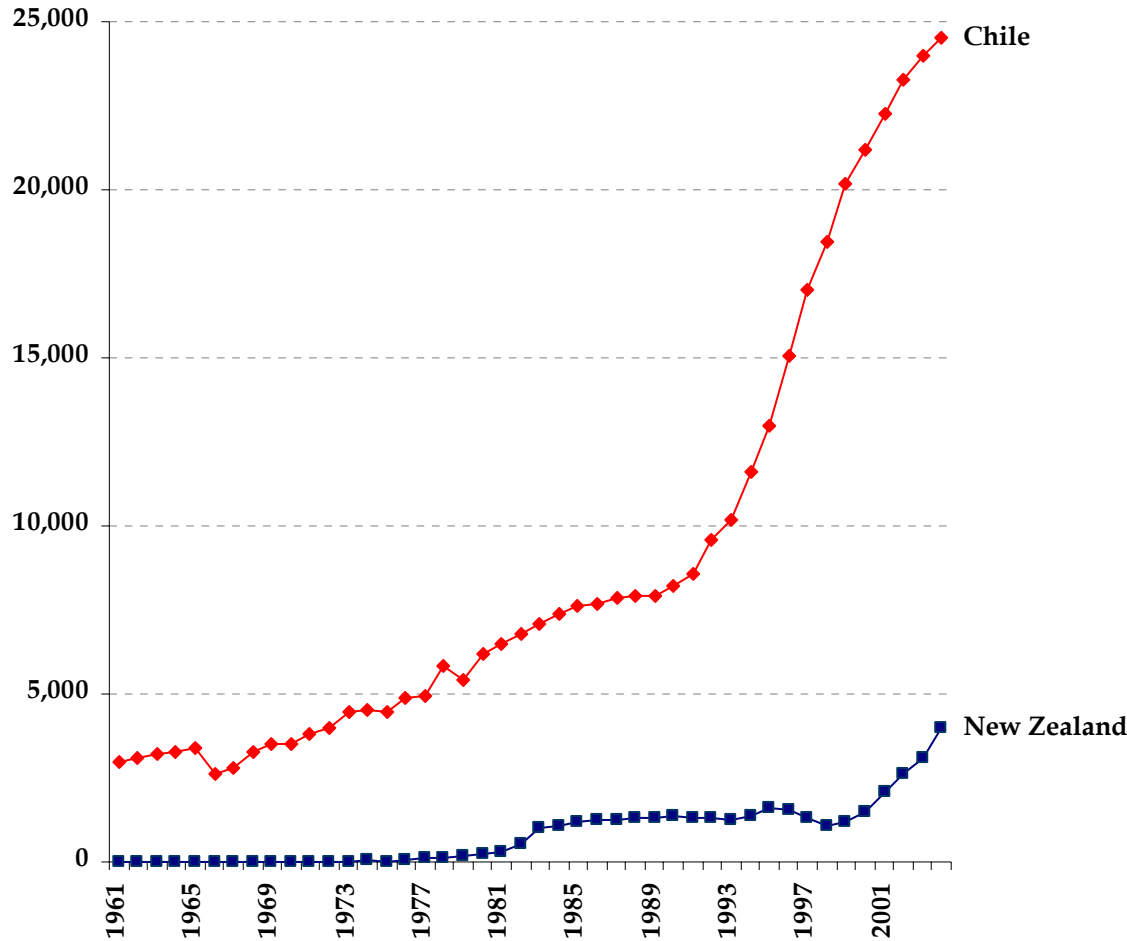
## Notes

- Methodology used consumption in all forms (fresh, frozen, processed); grapes includes wine

# AVOCADO OPPORTUNITY

The experience of Chile – a country that shares our seasonal window – indicates avocados are a major opportunity

Avocado area: Chile vs. New Zealand (hectare, actual, 1961-2004)



## Discussion Points

- Why has Chile been more successful than New Zealand at avocados to date?
- Can we apply our skills at plant breeding to develop new varieties?

## DIRECTIONAL TREND - VEGETABLES

From the limited data available, the vegetable industry does not look healthy

Directional trends in vegetable farming  
(growth or decline)

	Land Use (82-02)	(95-02)	Prod- uction (94-04)	# of Growers (97-04)	Employ- ment (85-98)	Turnover (98-03)
Overall	▲	▼	▼	▼	▼	▲
Potatoes	▲	=	▲	▼	n/a	n/a
Onions	▲	▼	▼	▼	n/a	n/a
Peas & beans	▼	▼	▼	▼	n/a	n/a
Sweetcorn	▲	▼	▲	▼	n/a	n/a
Squash	▲	▼	▼	▼	n/a	n/a
Broc/Cab/ Cauli	▲	▼	▲	▲	n/a	n/a
Asparagus	▼	▼	▼	▼	n/a	n/a
Carrots	▲	▼	▼	▼	n/a	n/a
Other	▲	▼	▲	▼	n/a	n/a

### Discussion Points

- Why?

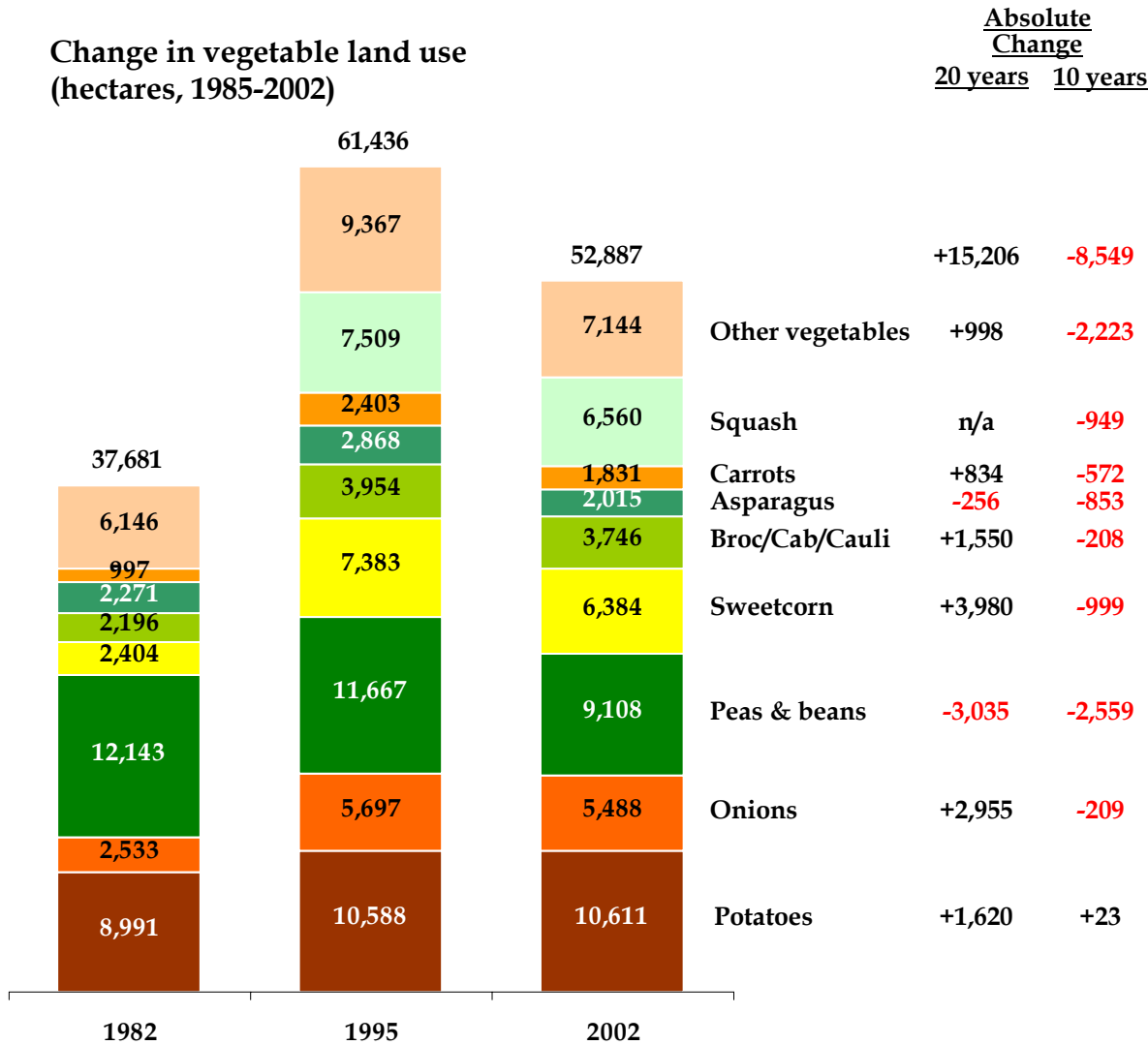
### Notes

- **Limited data available**
- Differing time periods (e.g. turnover 5 years vs. land use 17 years)
- Use with caution; should be treated as directional; different surveys; different methods; different definitions
- Details available on specific pages

# CHANGE IN LAND USE - VEGETABLES

Land used in vegetable production is declining significantly

Change in vegetable land use (hectares, 1985-2002)



## Discussion Points

- Competition from China in vegetables

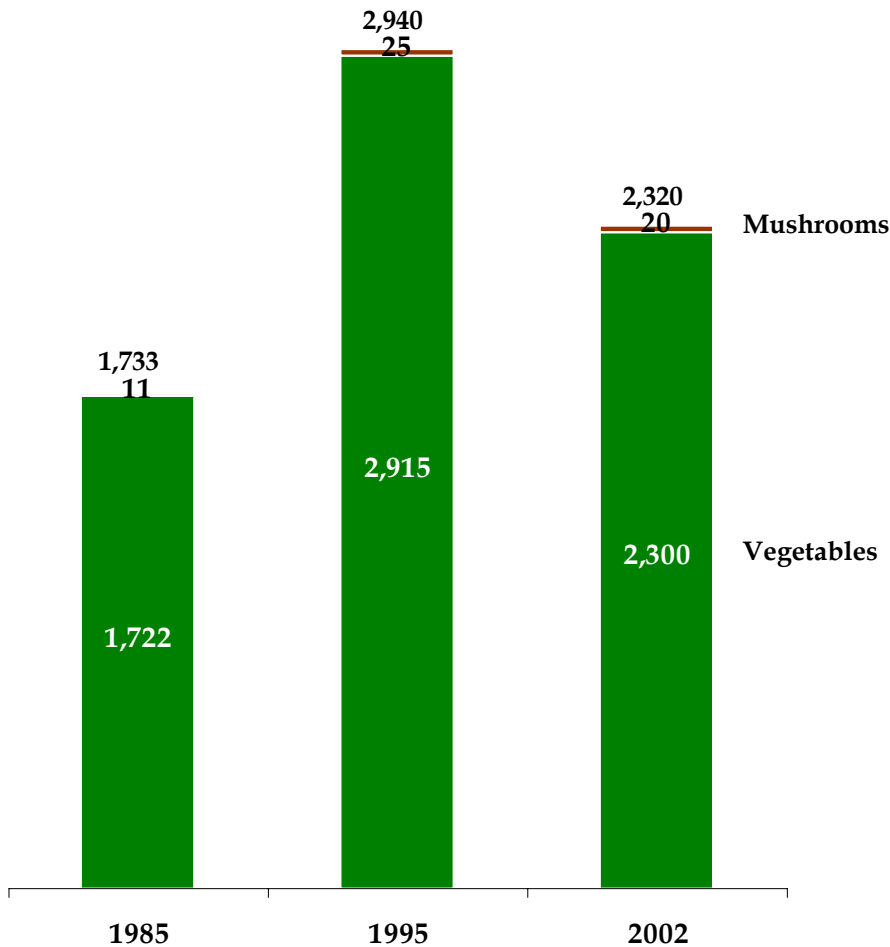
## Notes

- No data or additional breakdown available for 1985
- Sweetcorn (as opposed to maize silage) is classified as a vegetable by Vegfed
- No olive or nut data available for prior periods; data included in other fruit nec

## CHANGE IN NUMBER OF FARMS BY TYPE - VEGETABLES

After a period of growth between 1985 and 1995, the number of vegetable farms has declined recently

Number of vegetable farms  
(farms, actual, 1985-2002)



	Absolute Change	
	17 years	10 years
Mushrooms	+9	-5
Vegetables	+578	-615

### Discussion Points

- Why is this happening? Will it continue?
- What is the role of economies of scale?

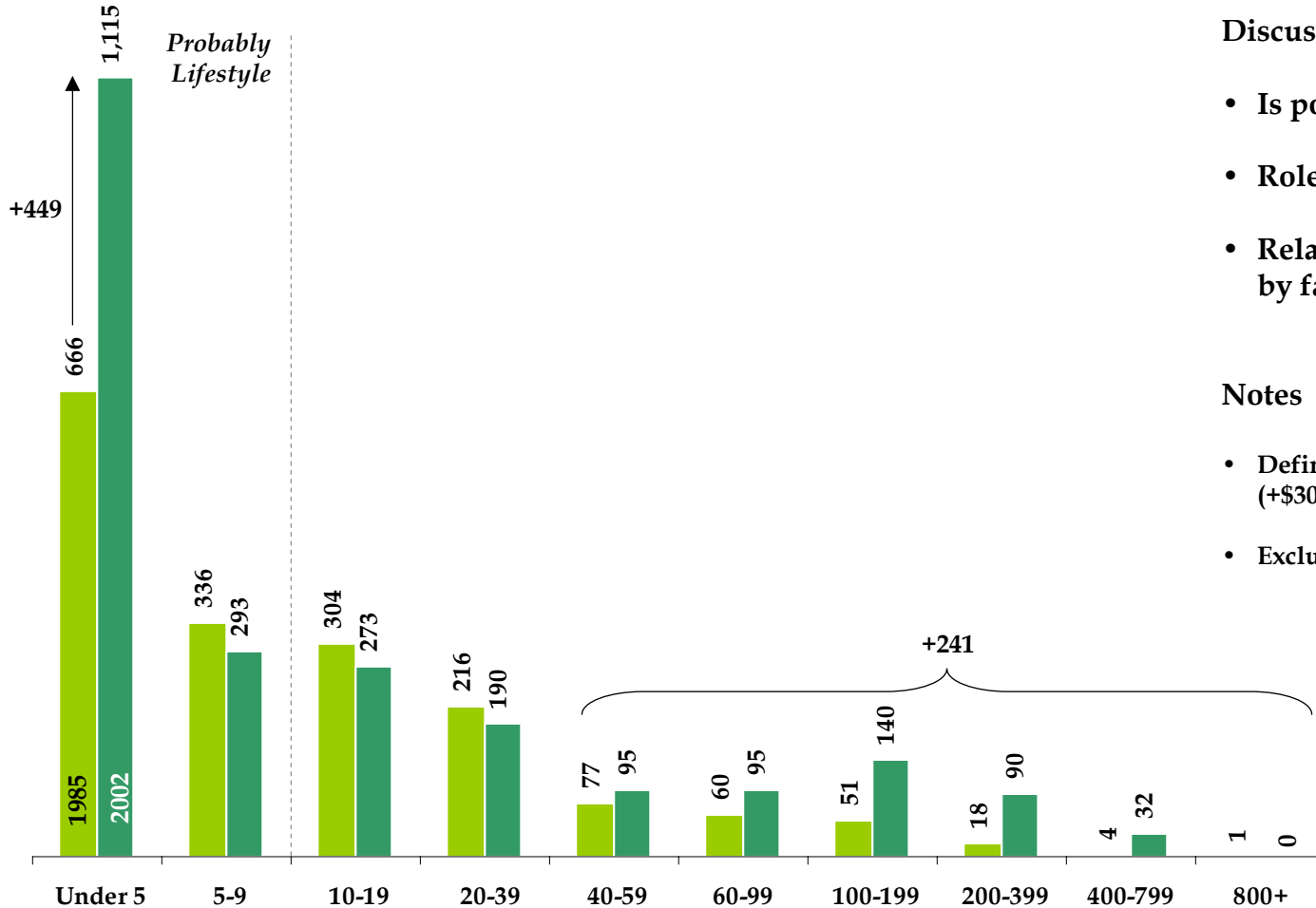
### Notes

- No by type breakout available from this source; see later page for breakout from a different source
- Excludes plant nurseries (1,400) and cut flower and flower seed growing (1,100) as these are not food
- Mushrooms are not technically a vegetable

## NUMBER OF FARMS BY SIZE - VEGETABLES

The overall growth in the number of vegetable farms over the past two decades has been at either end of the spectrum

Number of vegetable farms by size  
(#of farms, by size of farm, hectare, 1985-2002)



### Discussion Points

- Is polarisation taking place?
- Role and impact of lifestyle farms
- Relative impact of economies of scale by farm type

### Notes

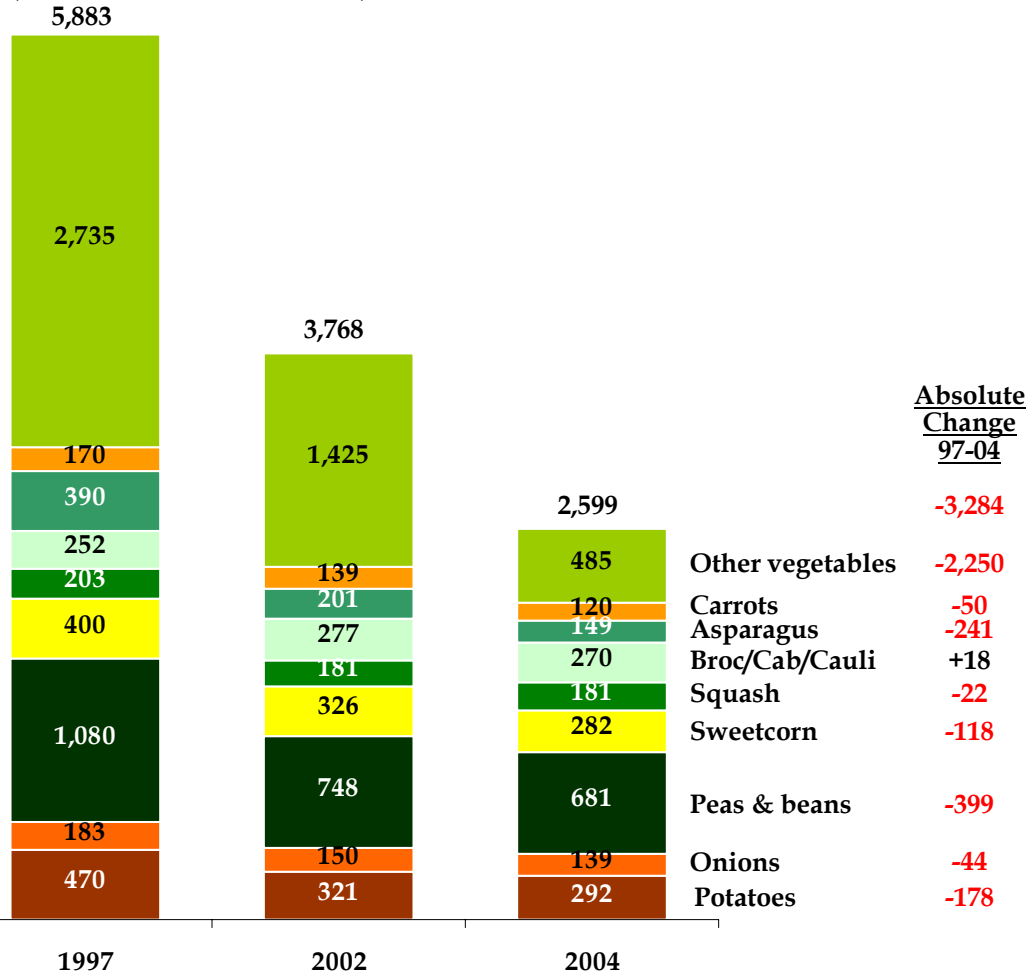
- Defined as farms registered for GST purposes (+\$30,000pa)
- Excludes flowers/plant nurseries (2,500)



# CHANGE IN NUMBER OF GROWERS BY TYPE - VEGETABLES

The number of vegetable growers has declined sharply recently

Number of vegetable growers  
(farms, actual, 1985-2002)



## Discussion Points

- Why is this happening? Will it continue?
- What is the role of economies of scale?

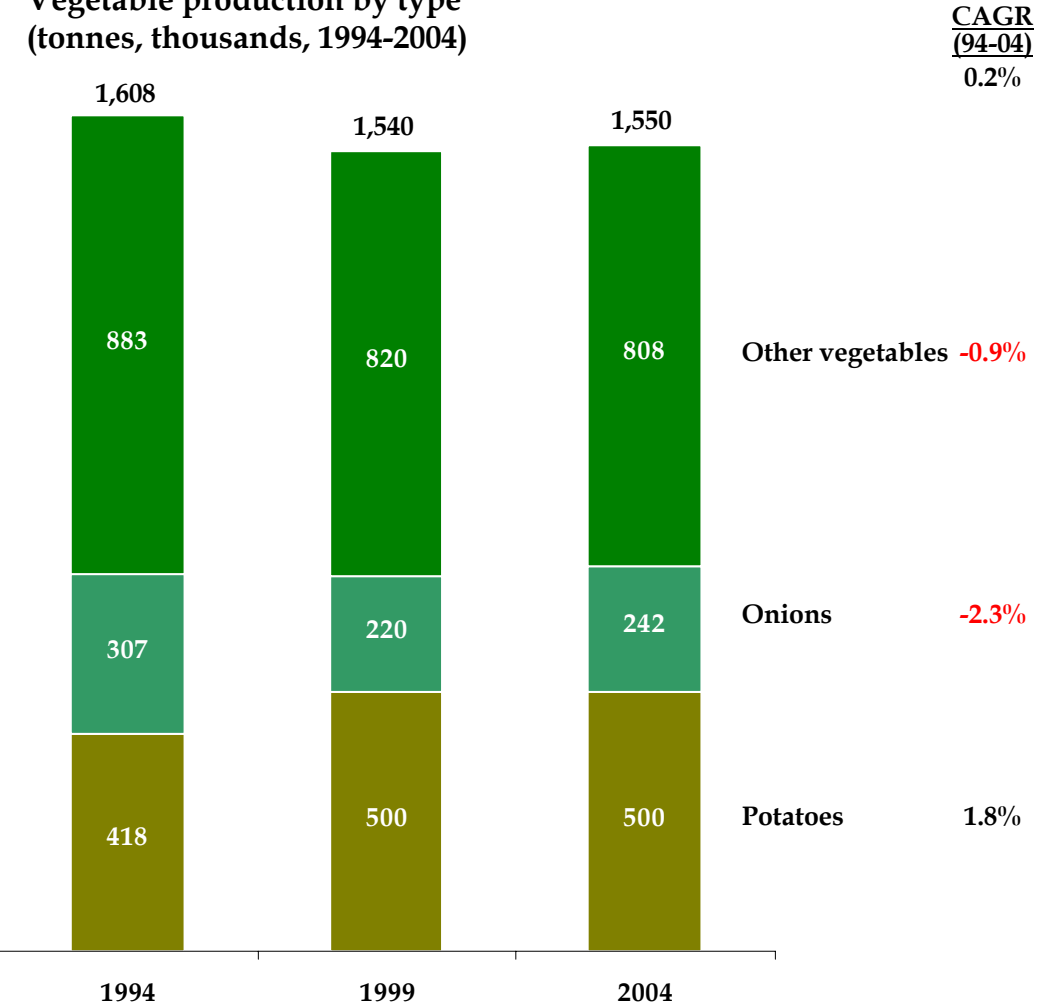
## Notes

- Note different definition and time period than previous
- This source (Hort Research) varies significantly from previous source (SNZ); may count multiple crops by a single farm?

# PRODUCTION - VEGETABLES

## Vegetable production is flat

Vegetable production by type  
(tonnes, thousands, 1994-2004)



### Discussion Points

- Flat production from declining land and farms implies strong productivity increase (?)

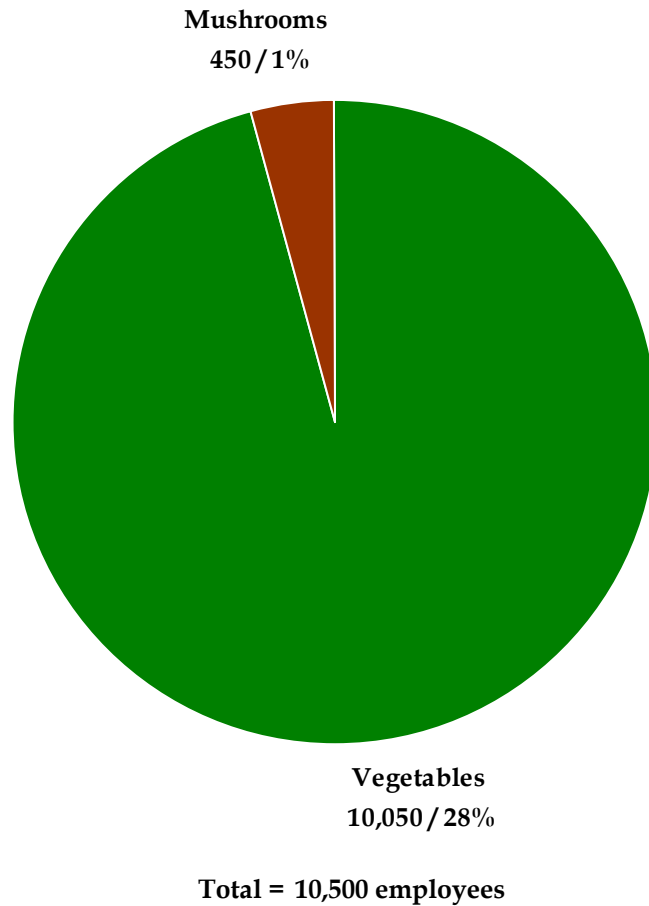
### Notes

- Data based on MAF estimates and is not robust

# FARM EMPLOYMENT - VEGETABLES

## Vegetable farms employ 10,500 people

Number of people employed on vegetable farms by type  
(people, actual, 1998)



### Discussion Points

- Is efficiency increasing?

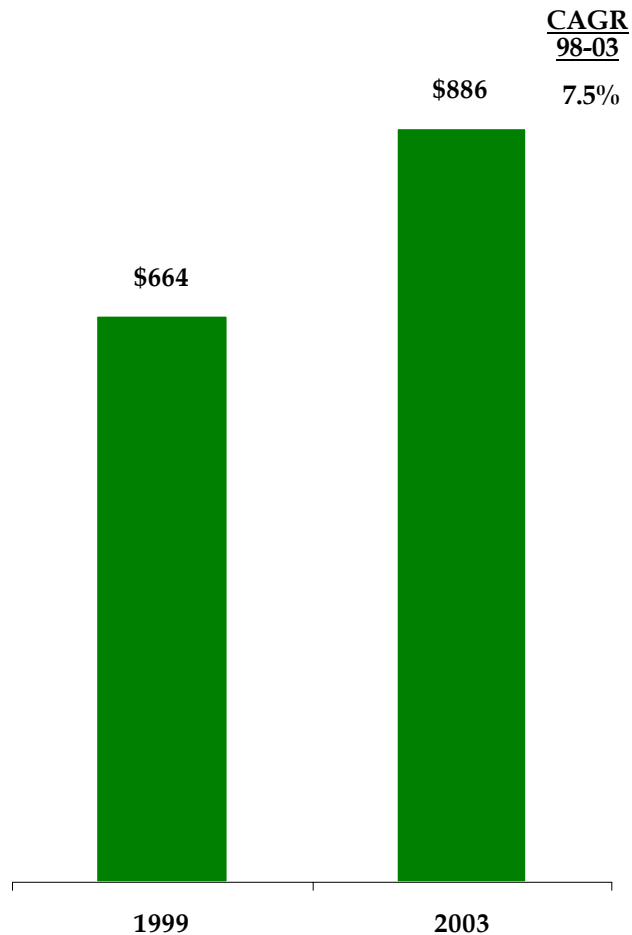
### Notes

- Total people not FTE
- Farm employment survey conducted only twice in last 18 years (1998, 2004)
- Uses 1998 data as this incorporated working proprietors (not measured in 2004 survey)
- May not capture total pool of seasonal labour; no measure of unpaid working family members (35,000 across livestock & horticulture in 1985 survey)
- Does not include flowers/plant nursery employment (8,100)

## FARM TURNOVER GROWTH - VEGETABLES

Total vegetable farm turnover has grown at a compound rate of 7.5% in the past four years

Total vegetable farm turnover  
(dollars, millions, 1999-2003)



### Discussion Points

- What is driving turnover growth?

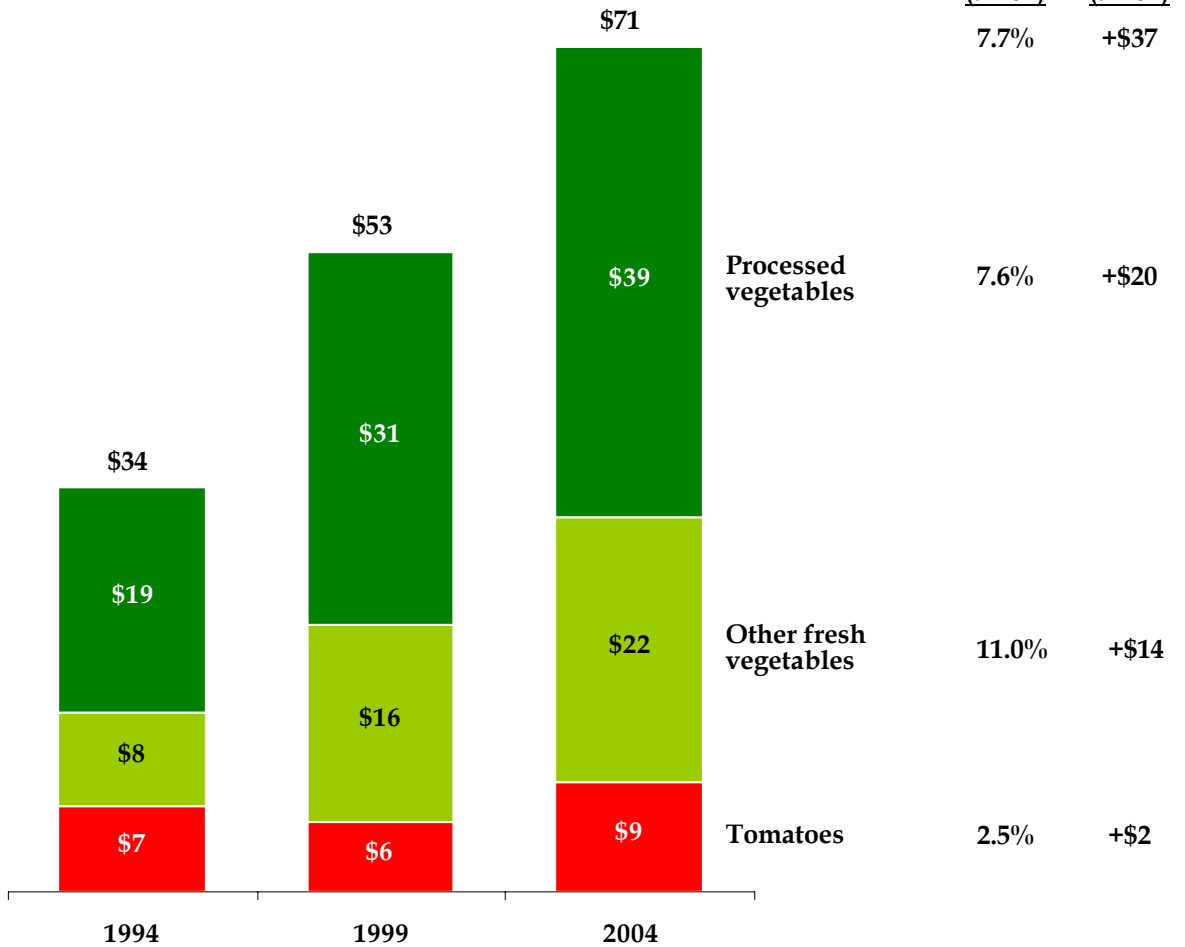
### Notes

- Actual dollars; not inflation adjusted
- No additional breakdown available at source
- AES 2004 data not yet available
- Comparable data not available for prior periods
- Methodology defines farm by primary income source

# VEGETABLE IMPORTS BY SEGMENT

## Vegetable imports are showing strong growth

Vegetable imports by segment  
(dollars, millions, 1994-2004)



### Discussion Points

- Drivers of growth of processed vegetables

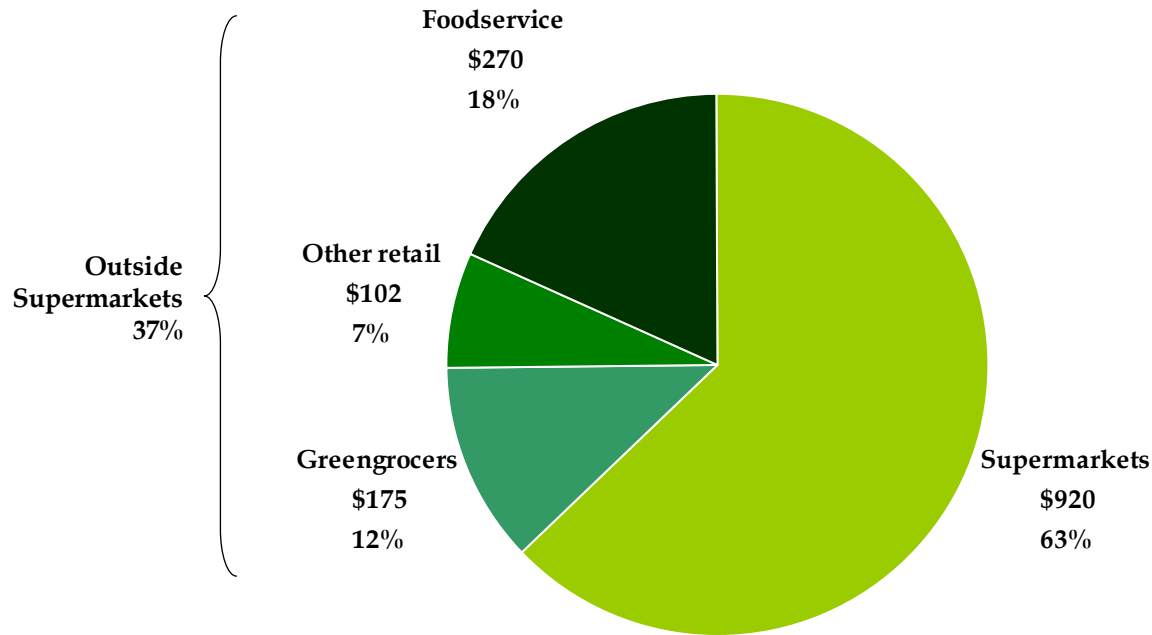
### Notes

- Classification:
  - Tomatoes (HS0702)
  - Other fresh vegetables (HS0701, 0703-0709)
  - Processed/frozen/etc. (HS0710-0714)

## DOMESTIC MARKET - FRUIT & VEGETABLES

The domestic market for fruit & vegetables has wholesale purchases of \$1,468 million, of which \$778m is vegetables

Wholesale purchases of fruit & vegetables by segment  
(dollars, millions, 2004)



Total = \$1,468 million  
of which 53% vegetables = \$778m

### Discussion Points

- Relative importance of non-supermarket channels

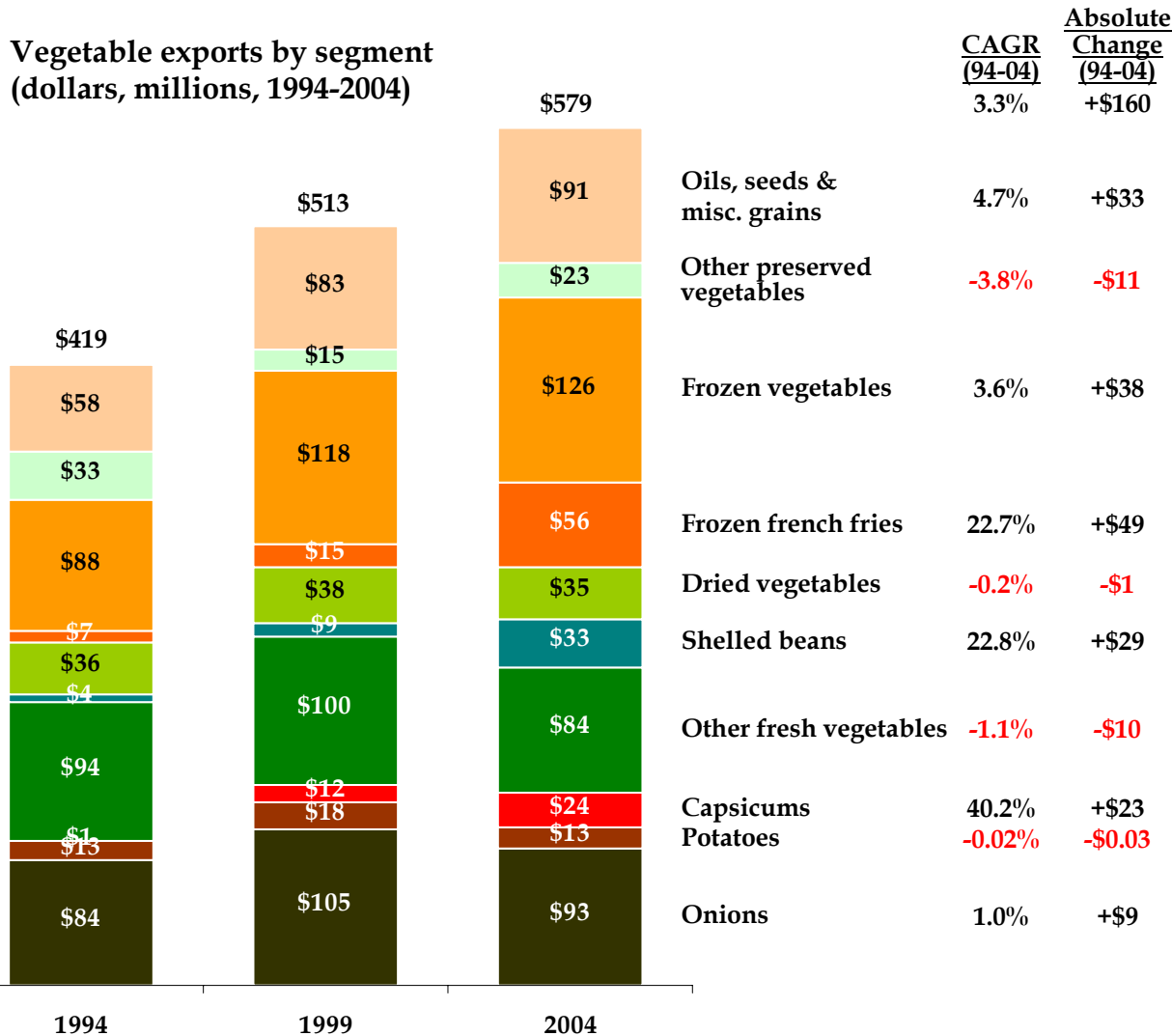
### Notes

- Excludes highly processed products (i.e. primarily fresh) and ingredient purchases by manufacturers
- Aggregate market is 47% fruit and 53% vegetables
- Represents wholesale purchases of fruit & vegetables (only) at cost to segment not retail sales to consumers (e.g. Greengrocers have turnover of \$283m of which 75.6% is f&v on which they took an average gross margin of 22% for a wholesale cost of \$175m)

# VEGETABLE EXPORTS BY SEGMENT

While vegetables are showing below average growth, there are some stars

Vegetable exports by segment  
(dollars, millions, 1994-2004)



### Discussion Points

- Growth of frozen french fries
- Shelled beans?

### Notes

- Revised classifications from earlier document
  - Includes misc grains, seeds (HS12),

## INDUSTRY STRUCTURE - FRUIT & VEGETABLE PROCESSING & WHOLESALING

The fruit and vegetable sector is composed of three distinct segments

- Three distinct segments:
  - Fresh fruit primarily for export (Zespri, T&G/Enza)
    - Structure are products of historic government-mandated monopsonies (producer boards)
    - Built on historical new product development (Gala & Braeburn Apples, Kiwifruit)
    - Highly focused on exports to a small number of high income countries
    - Large players have a narrow focus (kiwifruit, apples) unlike global fruit companies (e.g. Dole)
  - Fresh fruit & vegetable wholesale for domestic consumption (T&G, MG Marketing, Freshmax)
    - Ongoing evolution away from market floor to integrated wholesalers
    - Three key customer segments: supermarket chains, greengrocers and foodservice
  - Processed/frozen vegetables (Heinz Watties, McCain)
    - Strong role of global multinational leaders (Heinz, McCain)
    - Significant value-added through processing/packaging



## KEY COMPANIES - FRUIT & VEGETABLE PROCESSING & WHOLESALING

There are a small number of large players

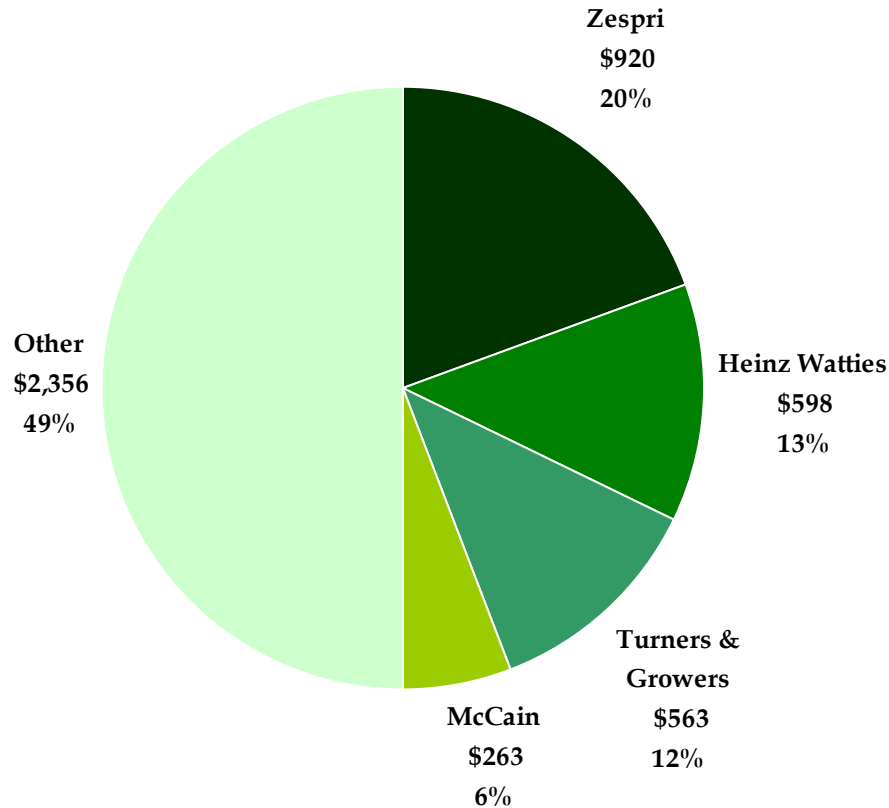
Key companies in the fruit & vegetable manufacturing and wholesaling sector

Company	Turnover (NZ\$; m)	Employees	Ownership	Activities
Heinz Watties (NZ)	\$1,025	600 +1,000 seasonal	United States Public Listed	- Production of a range of vegetable-based and other grocery items (incl. Tegel \$598m in total)
Zespri Group	\$920	135	New Zealand Cooperative	- Kiwifruit processing and marketing
Turners & Growers	\$563	1,449	New Zealand Public Listed	- Fruit wholesaling and processing - 78% owned by GPG; 10% by Noboa of Ecuador
McCain Foods (NZ)	\$263	400	Canada Private	- Frozen vegetables processing
MG Marketing	\$90	325	New Zealand Cooperative	- Fruit & vegetable wholesaling, importing and exporting
Freshmax	?	300	New Zealand Private	- Fruit & vegetable wholesaling, importing and exporting

## MARKET SHARE - FRUIT & VEGETABLE PROCESSING & WHOLESALING

While there are strong players in fruit & vegetable processing and wholesaling, there are also a lot of smaller companies

New Zealand fruit & vegetable processing and wholesaling turnover market share (% of sales; 2004)



### Discussion Points

- Implications of large size of “other”

### Notes

- Combines processing and wholesaling
- Market share represents New Zealand wholesale domestic sales and export sales (at border); does not include international sales or margins
- Excludes wine (which was included in previous draft report)

## ACQUISITIONS - FRUIT & VEGETABLE

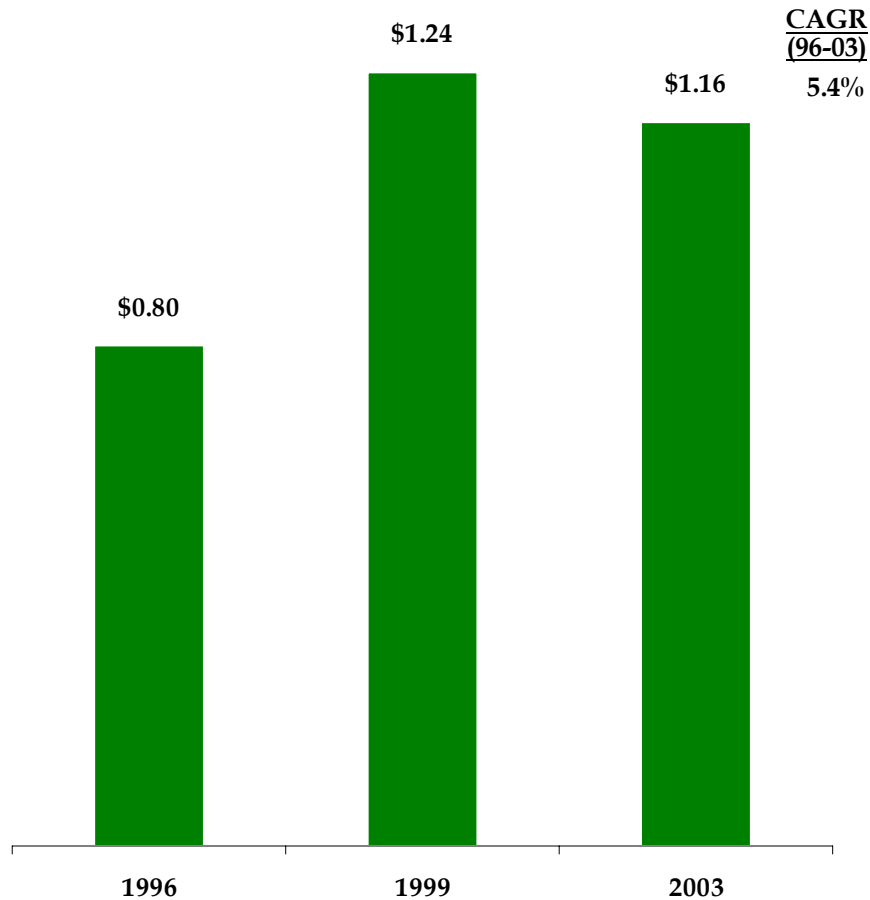
There have been a number of acquisitions recently in the fruit and vegetable sector

Acquiror	Acquiree	Date	Notes
Turners & Growers	Enza	Dec 2002	Merger engineered by GPG of a domestic wholesaler and a apple exporter
Guinness Peat Group	Enza	May 2002	GPG acquired former Apple and Pear Marketing Board from farmer shareholders on deregulation for \$72m
Guinness Peat Group	Turners & Growers		GPG acquired 46% of wholesale fruit & vegetable wholesale market business
Turners & Growers	Status Produce Ltd.	May 2002	Acquires tomato grower and wholesaler
SK Foods	Cedenco	May 2001	Commodity vegetable processor bids initially for 54.8% for \$12.5m (bids in 2003 for remainder shares)
McCain	Heinz Fielding french fries and vegetable operations	May 2001	Frozen potatoes & vegetables business for \$51m
Cedenco	Heinz Gisborne frozen food operations	Oct 1999	Cedenco acquires Heinz Gisborne frozen food operations with turnover of approximately \$7m

# FRUIT & VEGETABLE PROCESSING TURNOVER GROWTH

Fruit & vegetable processing has show good growth, albeit with up and downs

Fruit & vegetable processing turnover  
(dollars, millions, 1996-2003)



### Discussion Points

- Reasons for recent decline?

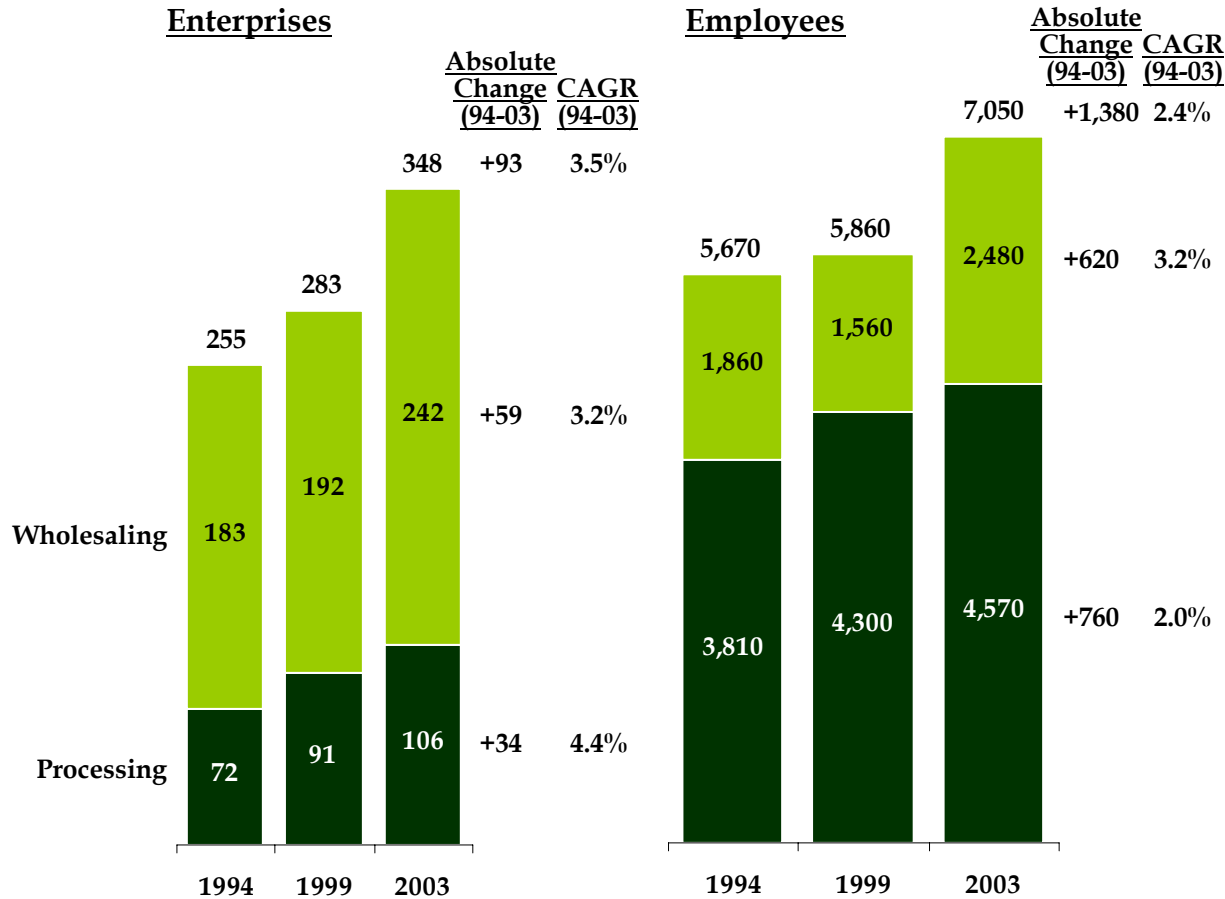
### Notes

- Processing turnover only; no separate data availability in AES on f&v wholesale; No data available prior to 1996 (AES); 2004 data not yet available

# FRUIT & VEGETABLE PROCESSING

The number of enterprises and employment in the sector is growing

Fruit & vegetable processing statistics  
(enterprises, employees, actual, 1994-2003)



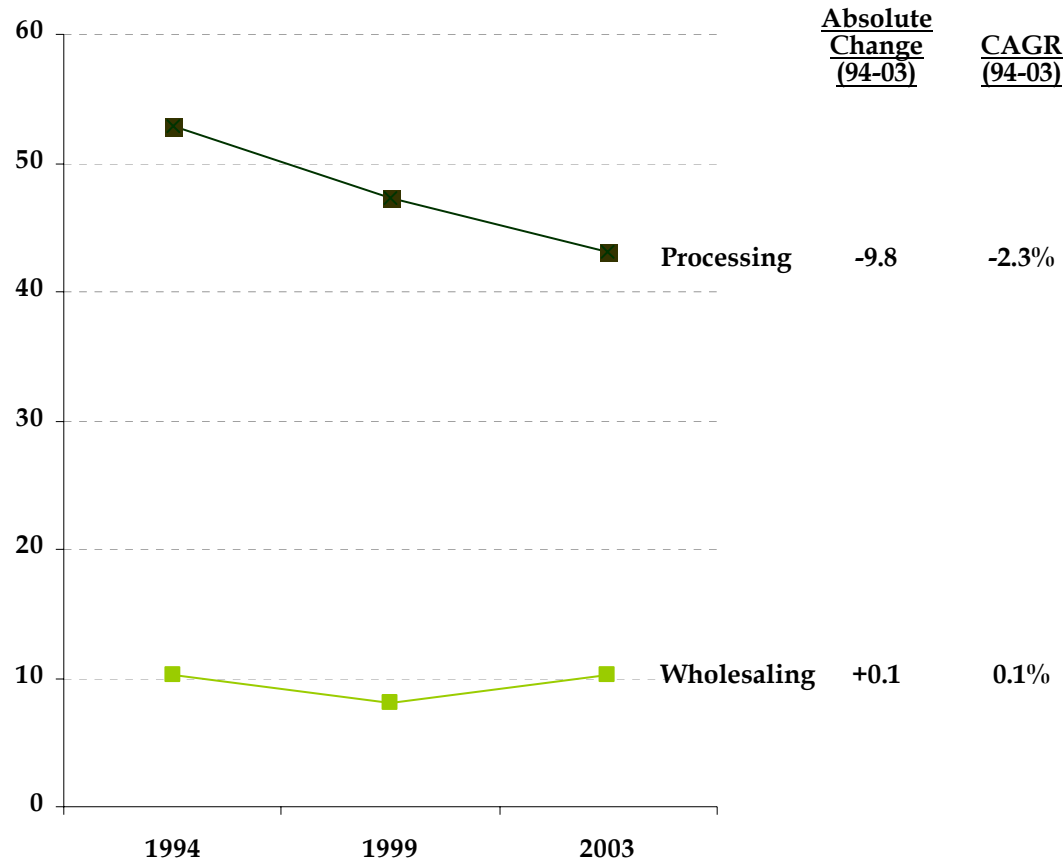
## Discussion Points

- Cause of recent jump in food processing employment

# FRUIT & VEGETABLE PROCESSING

Employment per enterprise is flat in wholesaling and declining in processing

Fruit & vegetable employees/enterprise  
(employees, actual, 1994-2003)

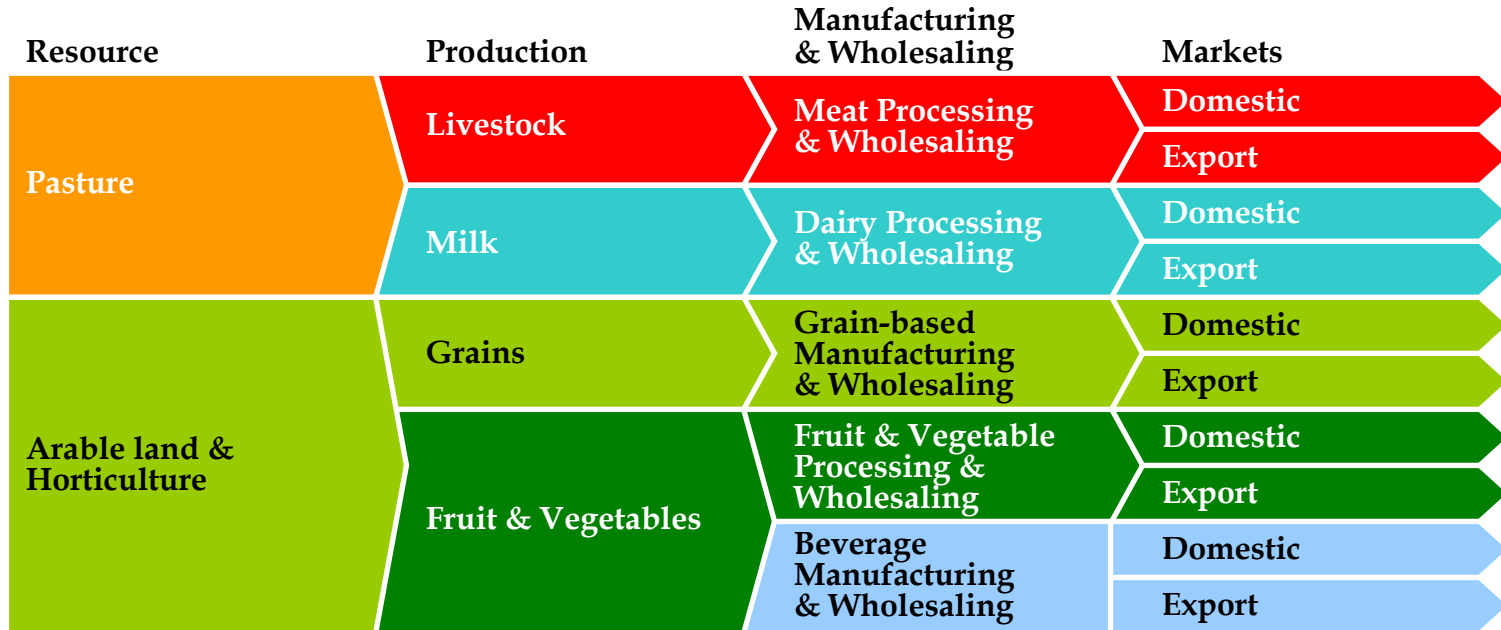


### Discussion Points

- What is driving more, smaller f&v processing enterprises?

## 2C. BEVERAGE PRODUCTION

Most beverages are a product of horticultural or arable plants



## INDUSTRY STRUCTURE - BEVERAGES

The beverage industry is now primarily controlled by international players

Three alcoholic segments and non-alcoholic:

- Beer brewing is a low growth duopoly controlled by two international companies
  - Lion Nathan, founded in New Zealand, listed/based in Australia since 2000, 46% owned by Kirin (Japan)
  - Dominion Breweries, founded in New Zealand, now owned by Asia-Pacific Breweries (Heineken/F&N)
- Wine production is a fast growing industry for New Zealand with a number of large players
  - Many wineries are now foreign owned (Montana, Nobile); ongoing acquisitions are occurring
  - Large group of small-to-medium sized New Zealand owned wineries who are capital constrained
- Spirits consists of Independent Liquor and a number of wholesalers of international brands
- Non-alcoholic beverages is a duopoly controlled by two international companies
  - Coca-Cola Amatil, Australian-listed Asia-Pacific licensee of Coca-Cola
  - Frucor, former Apple & Pear Marketing Board Juice Business, now a division of Danone
  - Smaller innovators emerging outside soft-drinks/water (e.g. Phoenix, Charlie's)



## KEY COMPANIES – BEVERAGES

The beverage industry is a mixture of local operations of international players and local companies

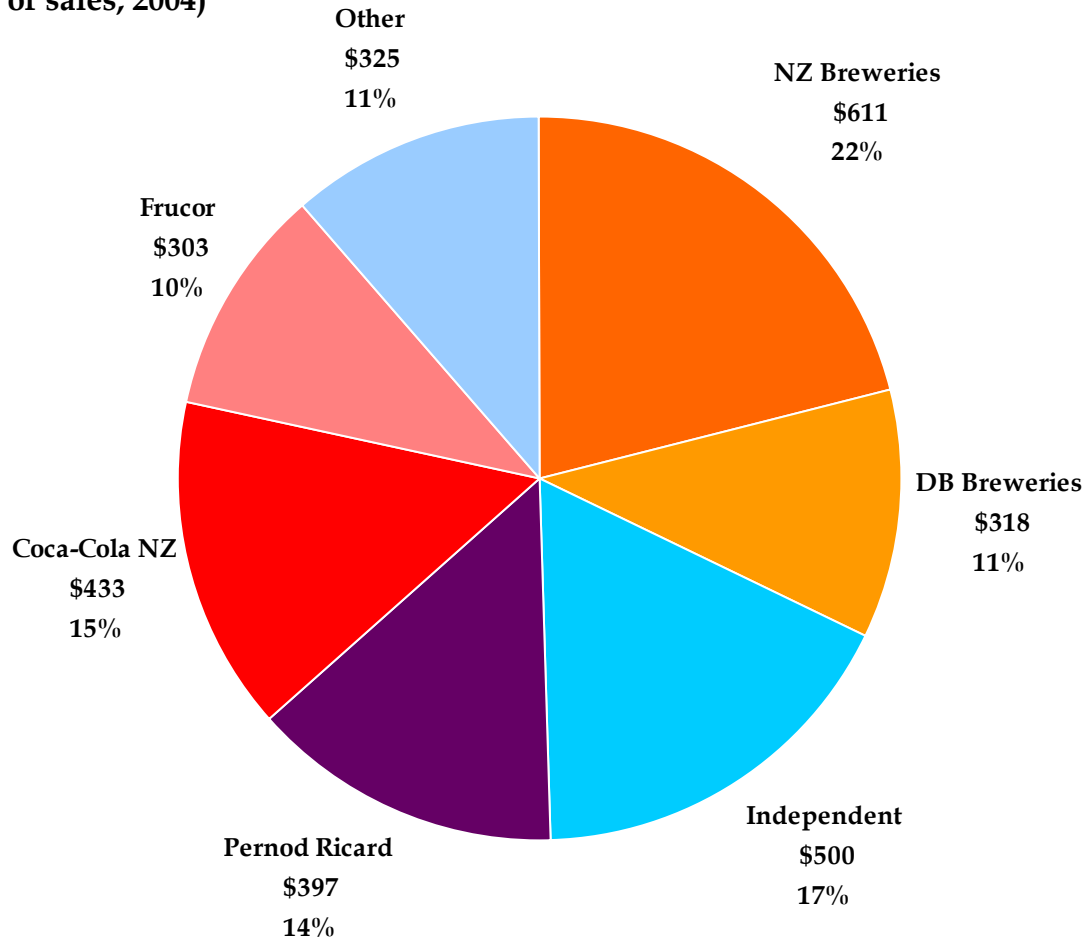
Key companies in the beverage manufacturing and wholesaling sector

Company	Turnover (NZ\$, m; 2004)	Employees <sup>1</sup>	Ownership	Activities
New Zealand Breweries	\$611	?	Australia Public Listed	- Produced beer; Lion Nathan subsidiary - Lion is 46% owned by Kirin Breweries (Japan)
Independent Liquor	\$500	?	New Zealand Private	- Produces RTD spirits, beer and wine - Operations in NZ, AU, Europe and Asia (incl. in sales)
Coca-Cola Amatil (NZ)	\$433	980	Australian Public Listed	- Soft drink production
Pernod Ricard	\$397	1,300	France Public Listed	- Wine production - Formerly Allied Domecq Wines / Montana Wines - Diageo option to buy most of business
DB Breweries	\$318	408	NL/Sing Public	- Beer production - Owned by Asia-Pacific (38% F&N; 62% Heineken)
Frucor Beverages	\$303	450	France Public Listed	- Soft drink production - Owned by Danone
NZ Wines and Spirits	\$188	?	Australia Public Listed	- Wine production - Lion Nathan subsidiary
Tasman Liquor Company	\$170	140	Australian Public Listed	- Liquor wholesaler - Subsidiary of ALM/Metcash
Nobilo Wines	A\$89	230	Australia Public Listed	- Subsidiary of Hardys - Owns National Liquor Distributors
Villa Maria	?	280	New Zealand Private	- Wine production
Negociants (NZ)	\$33.2	?	Australia Private	- Wine importer - Owned by Yalumba Australia
Delegats	\$32	refused	New Zealand Private	- Wine production
Southcorp NZ	\$28	52	Australian Public Listed	- Australian wine producer - Southcorp Australia recently acquired by Fosters

# MARKET SHARE - BEVERAGES

Six companies control about 90% of the New Zealand beverage industry

New Zealand beverage sales market share  
(% of sales; 2004)



## Discussion Points

- Why is this dominated by global multinationals? What are the implications of your answer to the overall New Zealand food industry?

## Notes

- No data available on size of wholesale sector
- Market share represents New Zealand wholesale domestic sales and export sales (at border); does not include international sales or margins
- Attempts to remove tobacco data by removing BAT turnover (\$1,027m in 2003)

## ACQUISITIONS - BEVERAGES (NON-WINE)

There have been a number of significant acquisitions in the non-wine beverages sector

Acquiror	Acquiree	Date	Notes
Asia-Pacific Breweries	DB Breweries	Sept 2004	Major shareholder acquired remainder of company; delisted
Just Water	Aqua-Cool	Apr 2004	Water delivery business
Fosters	Appletiser (distribution)	Feb 2004	From Coca-Cola Amatl
Danone Group	Frucor Beverages	Feb 2002	Production of V energy drink, Freshup, Just Juice, and NZ license for Pepsi for \$294m
Coca-Cola Amatil NZ	Rio Beverages	Nov 2002	Rio Gold, Keri, Thextons, Kiwi Blue with turnover of \$22m
Kirin Japan	46% of Lion Nathan	April 1998	Kirin Japan (US\$15.5b); Japan #1; acquires 45% (later 46%) of Lion Nathan

## ACQUISITIONS - BEVERAGES (WINE)

The New Zealand wine sector has attracted significant international investment...

Acquiror	Acquiree	Date	Notes
Delegat's	Oyster Bay	July 2005	Following takeover battle
Villa Maria Estate	Thornbury Wine	July 2005	Marlborough winery with 1 contract growers and 1,200 litres of fruit
Pernod Ricard	Allied Domecq NZ companies	July 2005	\$7.5b deal Pernod seeking to split business between Fortune Brands and Diageo (Montana Wines for \$834m)
Pernod Ricard (Orlando Wyndham)	Framingham Wine Co.	Apr 2004	Established 1991; includes Tylers Stream brand
Vincor International (CAN)	Kim Crawford	2003	For \$18m; aiming to process 4,000 T grapes in 2005
Aster Family	De Redcliffe Winery	Apr 2002	Aster family of Oregon purchases De Redcliffe
Rangitira	Te Kairanga	2002	Rangitira (JR Mckenzie Trust) acquires 25% share of Te Kairanga Wines
Lion Nathan	Wither Hills	2002	For \$52m; produced 80,000 cases in 2002
Fosters (Au)	Ponder Estate	2002	Fosters/Beringer Blass acquires Ponder Estate in Marlborough; producing 28,000 cases on 23 ha for \$11.1m
Fosters (Au)	Hawkesbridge	2002	Matua Wines purchases Hawkesbridge, including 16ha in Marlborough, producing 10,000 cases Sauvignon Blanc
Allied Domecq	Montana Wines	2001	For ~\$1b

## ACQUISITIONS - BEVERAGES (WINE)

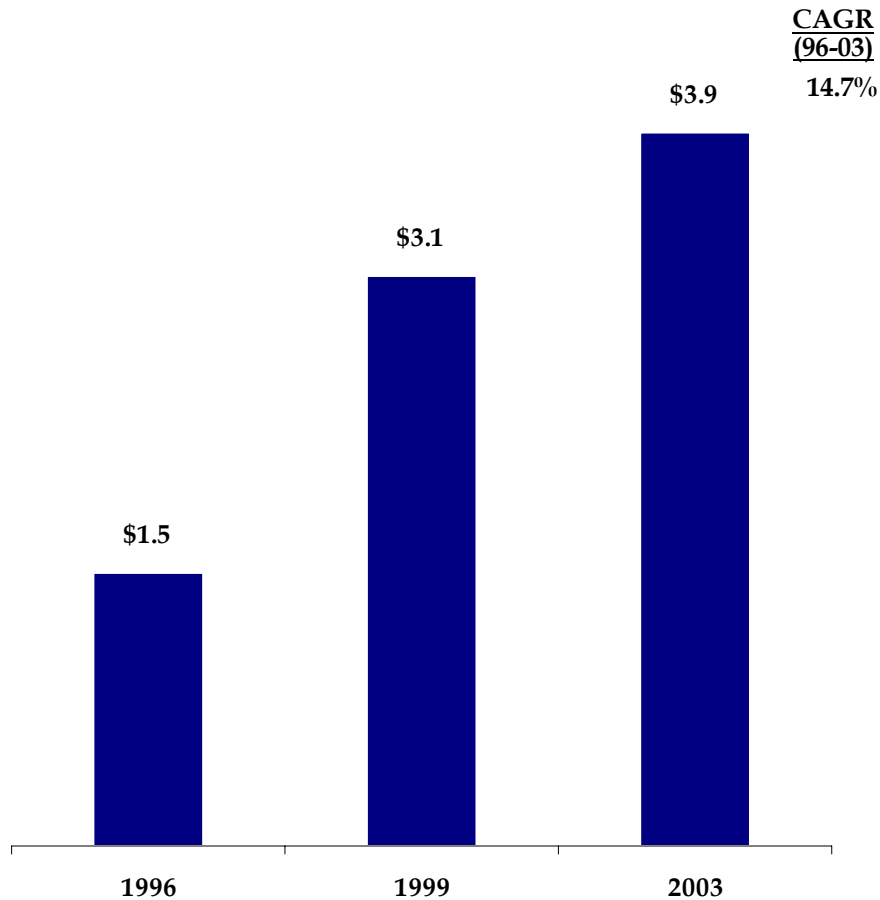
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Acquiror	Acquiree	Date	Notes
Fosters (Au)	Matua Valley	2001	Foster's subsidiary Beringer Blass acquires 43%; raised to 100% in 2004
Montana Wines	Corbans Wines	Sept 2000	Montana buys Corbans, then a subsidiary of DB Breweries for \$154m
BRL Hardy	Nobilo Wines	2000	Acquires additional shares; now part of Constellation Brands
Nobilo Wines	Selaks Wines	Sept 1998	-
BRL Hardy	Nobilo Wines	1998	BRL Hardy acquires 33% of newly listed Nobilo Wines

## BEVERAGE/TOBACCO PROCESSING TURNOVER GROWTH

### The beverages/tobacco sector is showing strong growth

Beverage/Tobacco manufacturing turnover  
(dollars, millions, 1996-2003)



#### Discussion Points

- Drivers of growth - why are we succeeding in beverages?

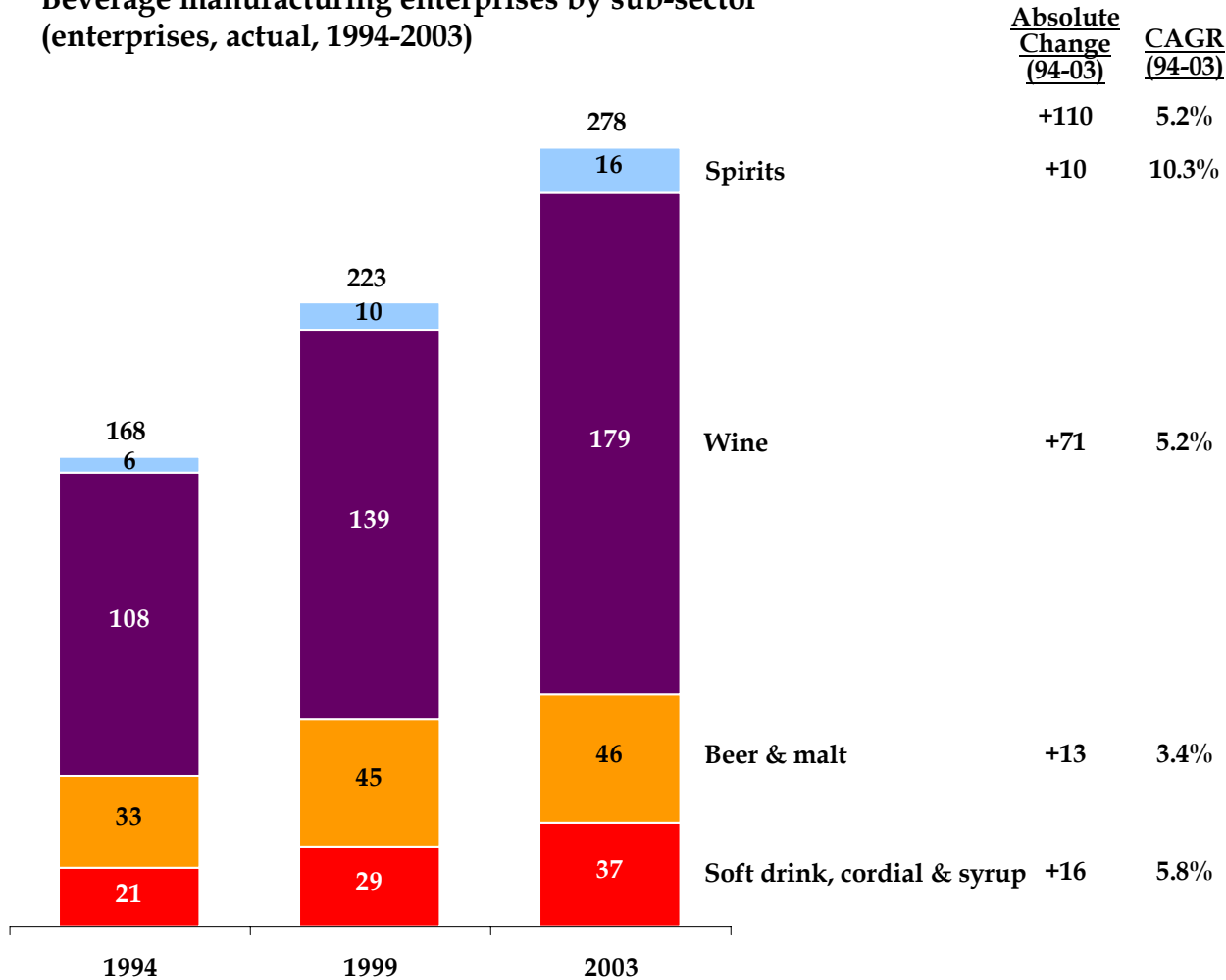
#### Notes

- Unable to separate Beverage and Tobacco data, refer all queries/complaints to Statistics New Zealand
- Processing turnover only; no separate data availability in AES on wholesale; no data available prior to 1996 (AES); 2004 data not yet available

# BEVERAGE MANUFACTURING ENTERPRISES

The number of beverage enterprises is growing across the board

Beverage manufacturing enterprises by sub-sector (enterprises, actual, 1994-2003)



Sub-sector	Absolute Change (94-03)	CAGR (94-03)
Spirits	+10	10.3%
Wine	+71	5.2%
Beer & malt	+13	3.4%
Soft drink, cordial & syrup	+16	5.8%

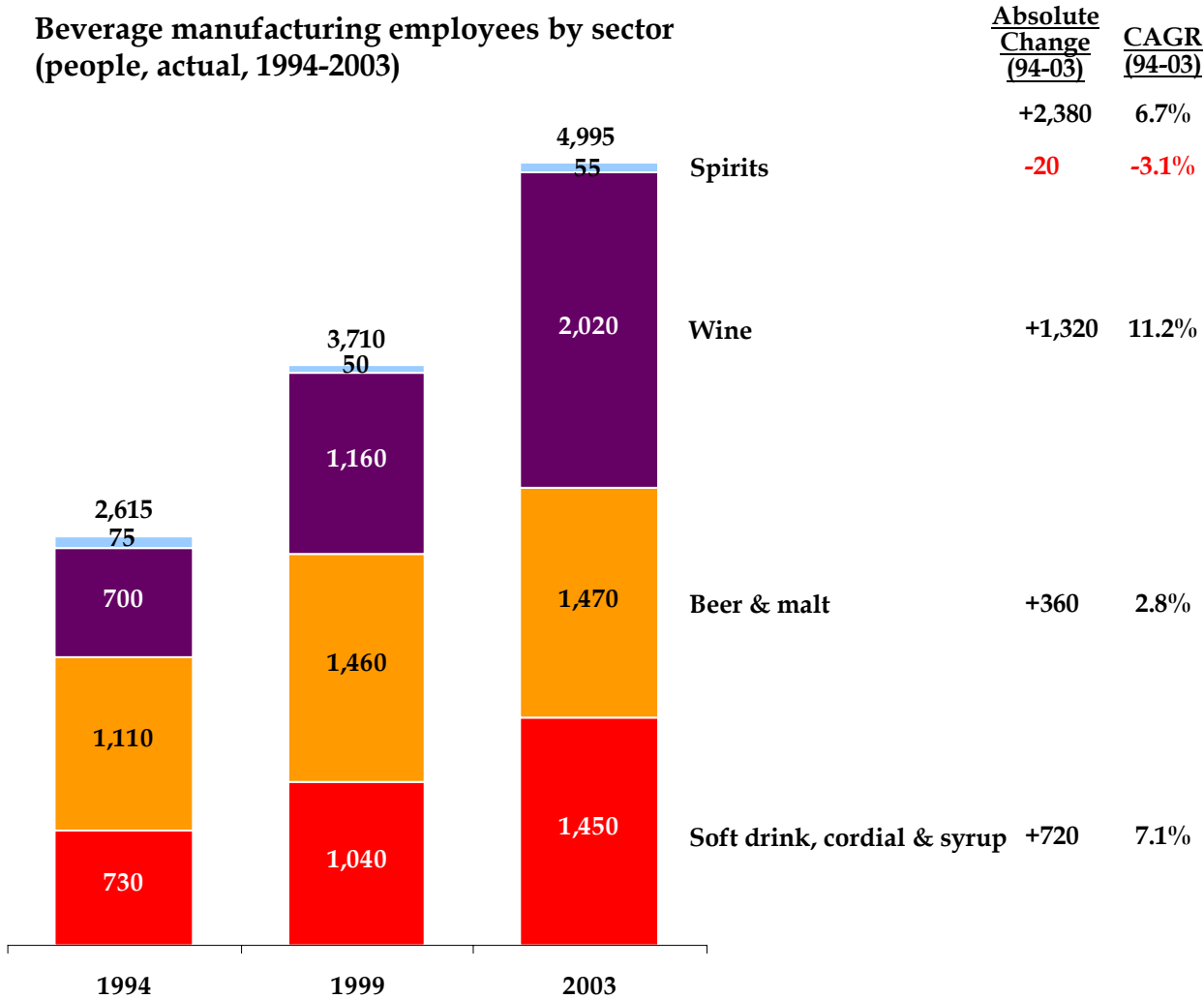
### Discussion Points

- What is needed to encourage continued growth

# BEVERAGE MANUFACTURING EMPLOYMENT

## Employment in beverage manufacturing is growing

Beverage manufacturing employees by sector  
(people, actual, 1994-2003)



Absolute Change (94-03)	CAGR (94-03)
+2,380	6.7%

-20	-3.1%
-----	-------

+1,320	11.2%
--------	-------

+360	2.8%
------	------

+720	7.1%
------	------

**Notes**

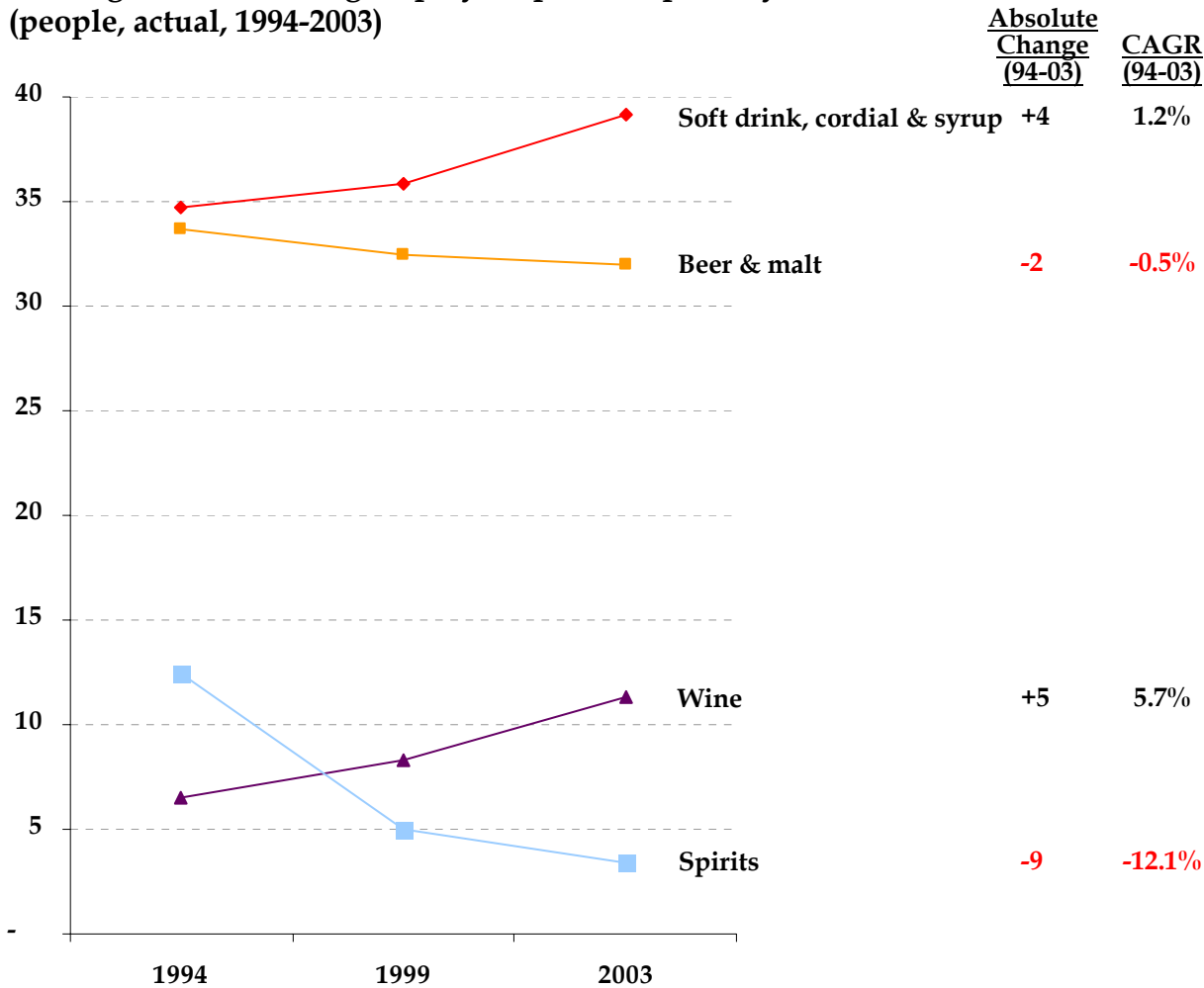
- Includes working proprietors
- Total employees not FTE



# BEVERAGE MANUFACTURING EMPLOYMENT PER ENTERPRISE

Employment per enterprise is growing in wine and soft drinks, but declining in beer and spirits

Beverage manufacturing employees per enterprise by sector (people, actual, 1994-2003)



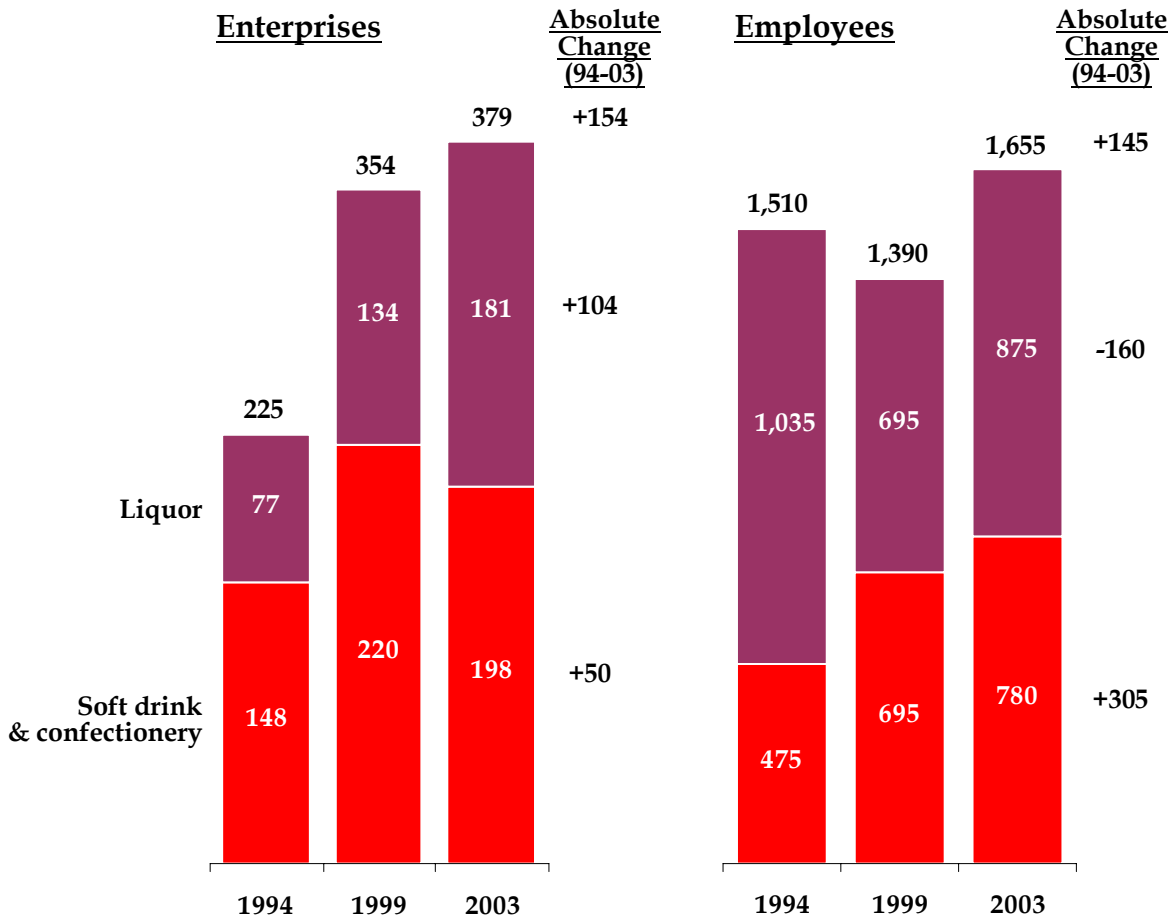
Notes

- Includes working proprietors
- Total employees not FTE

## BEVERAGE WHOLESALSA

Beverage wholesaling has seen a significant increase in the number of liquor wholesale enterprises but declining overall employment; employment in soft drinks/confectionery is up

Beverage wholesaling statistics  
(enterprises, employees, actual, 1994-2003)



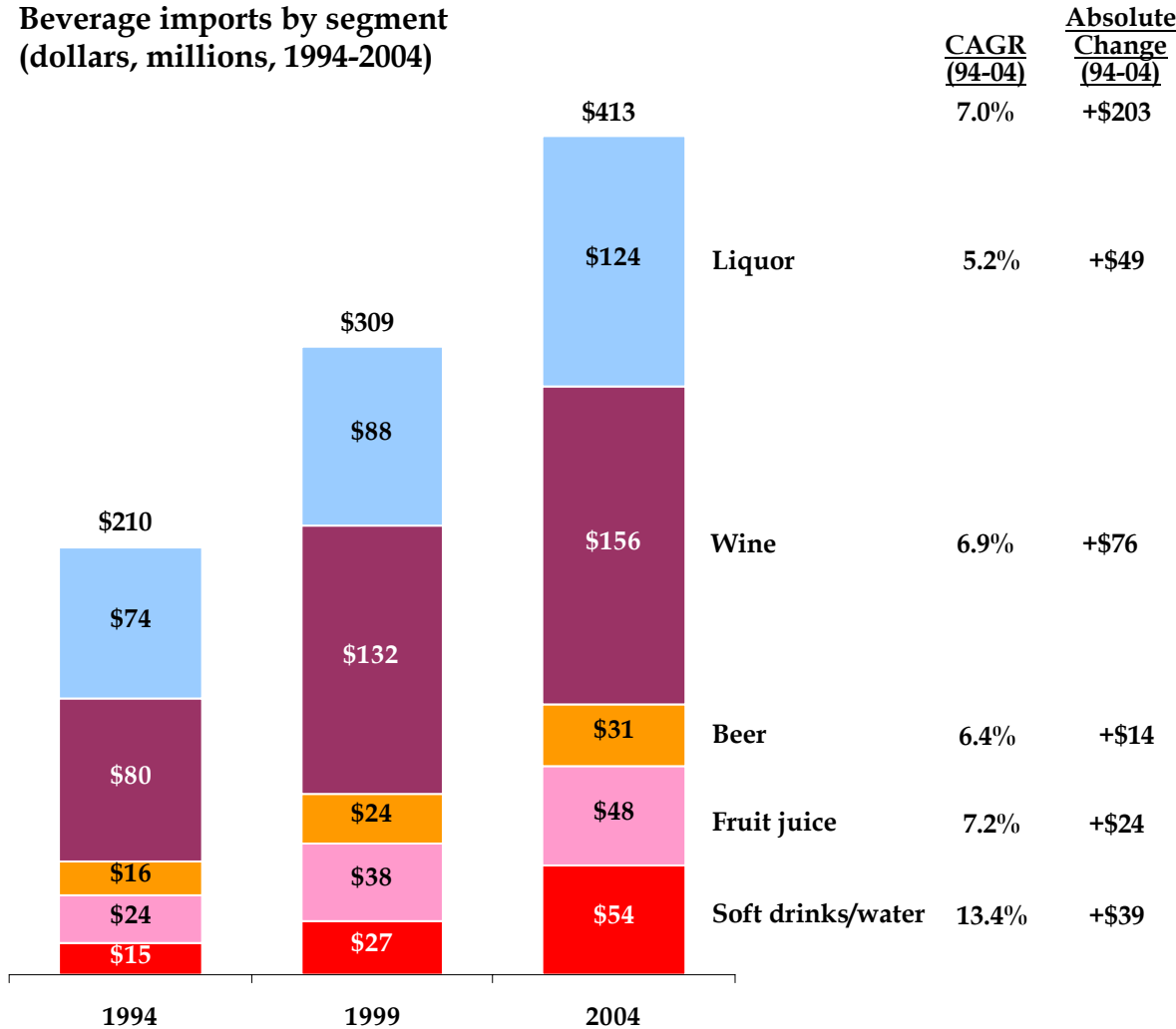
### Notes

- Soft drinks includes confectionery data inseparable at source (SNZ)
- No further breakdown available of liquor (SNZ)

# BEVERAGE IMPORTS BY SEGMENT

## Beverage imports are showing strong growth

Beverage imports by segment  
(dollars, millions, 1994-2004)



### Discussion Points

- Why are beverage imports growing so rapidly?

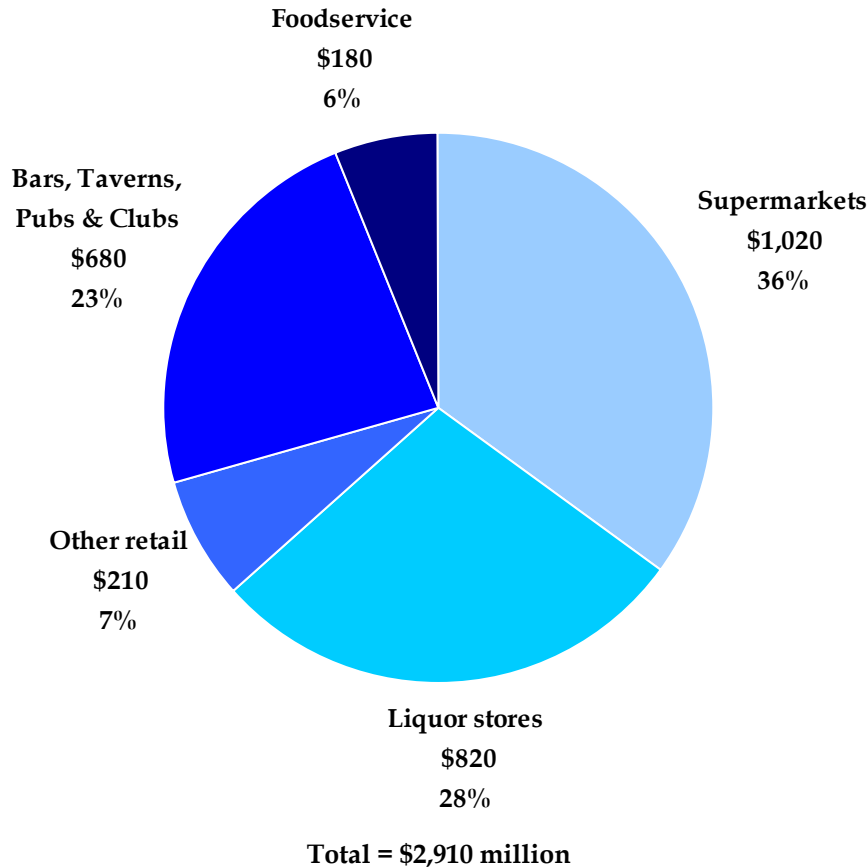
### Notes

- Classification:
  - Soft drinks/water (HS2201-2202)
  - Fruit juice (HS2009)
  - Beer (HS2203)
  - Wine (HS2204-2205)
  - Liquor (HS2206-2209) includes very small amount of vinegar

## DOMESTIC MARKET - BEVERAGES

The domestic market for beverages has wholesale turnover of \$2,910 million

Wholesale purchases of beverages by channel  
(dollars, millions, 2004)



### Discussion Points

- Relative importance of non-supermarket channels

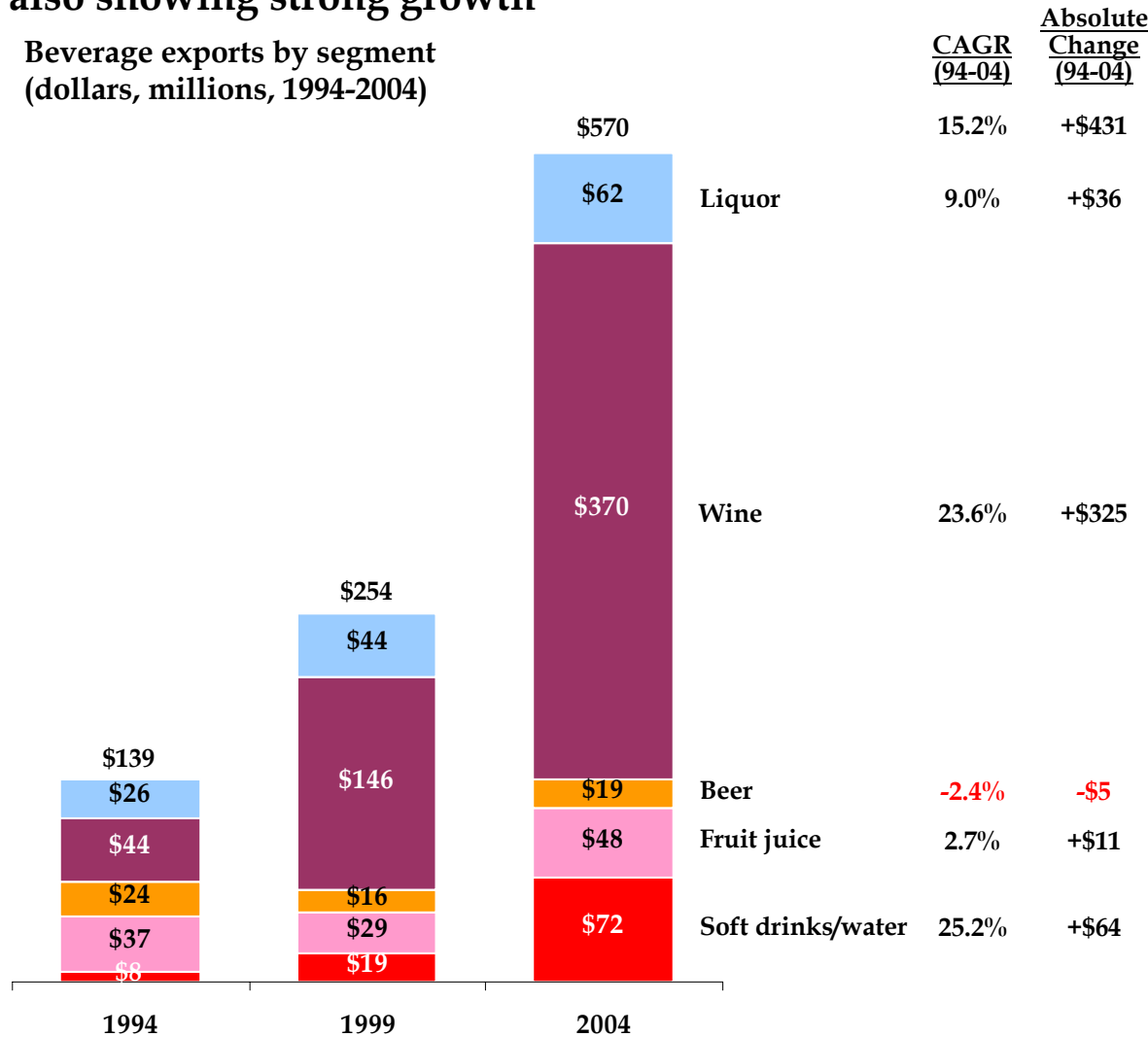
### Notes

- Represents wholesale purchases of beverages at cost to channel not retail sales to consumers
- Includes soft drinks, mineral water, fruit juices and other retail beverages

## BEVERAGE EXPORTS BY SEGMENT

While wine is the undisputed star of the beverages segment, soft drinks/water and liquor are also showing strong growth

Beverage exports by segment  
(dollars, millions, 1994-2004)



### Discussion Points

- How can we facilitate the continued growth of wine?
- Potential for soft drinks/water and liquor
- Why are countries as diverse as Germany and Mexico able to export lots of beer but we can't?
- Relatively low net exports of beverages (exports - imports)

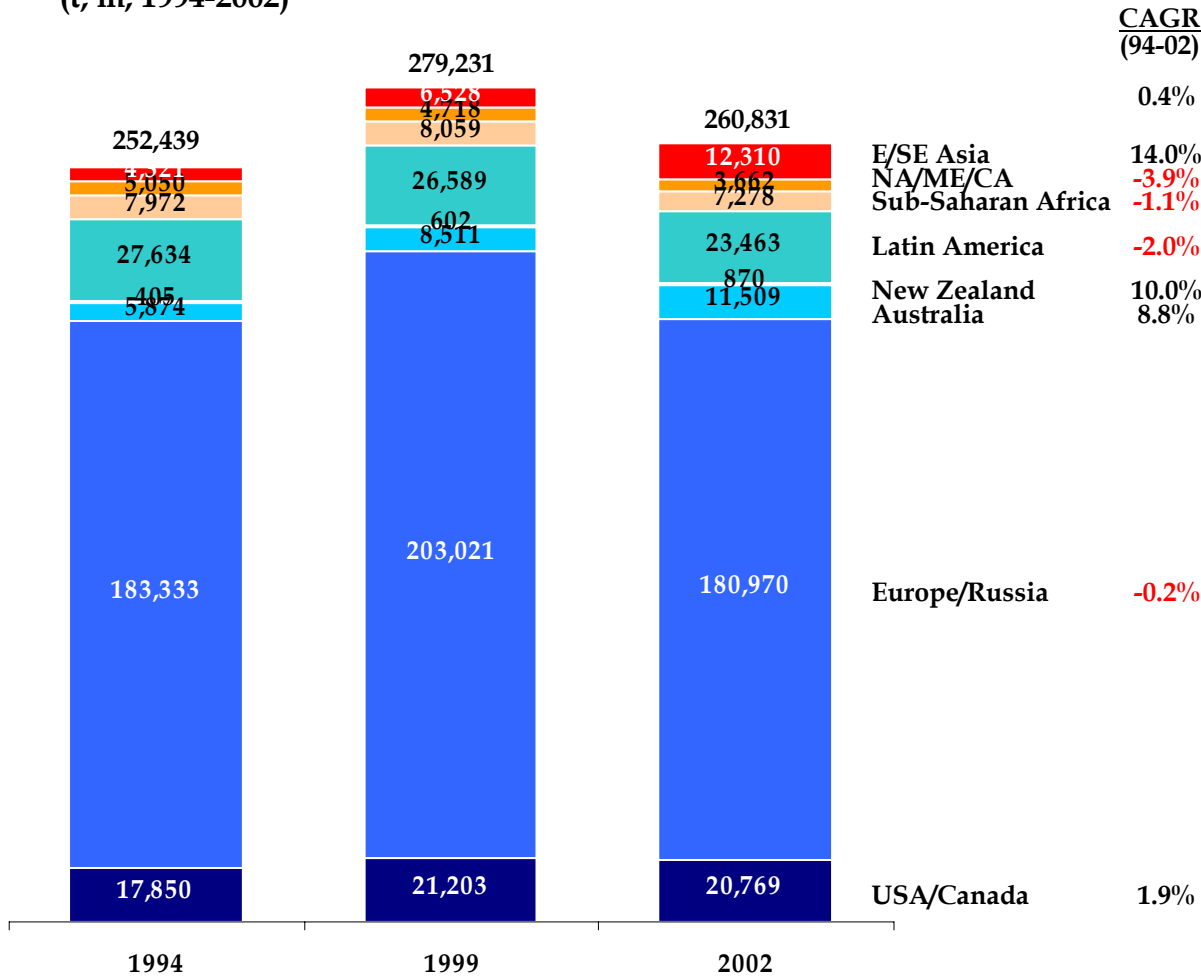
### Notes

- Fruit juice primarily apple
- Revised classifications from earlier document
  - Beverages includes HS22 (all), fruit juices (HS2009) and Wine (HS2204-2206)

# WINE PRODUCTION VOLUME BY REGION

Australia, Asia and New Zealand are all increasing wine production in a flat overall market

Global wine production by super-region  
(t, m, 1994-2002)



## Discussion Points

- How sustainable is New Zealand's recent growth rate over the next decade?

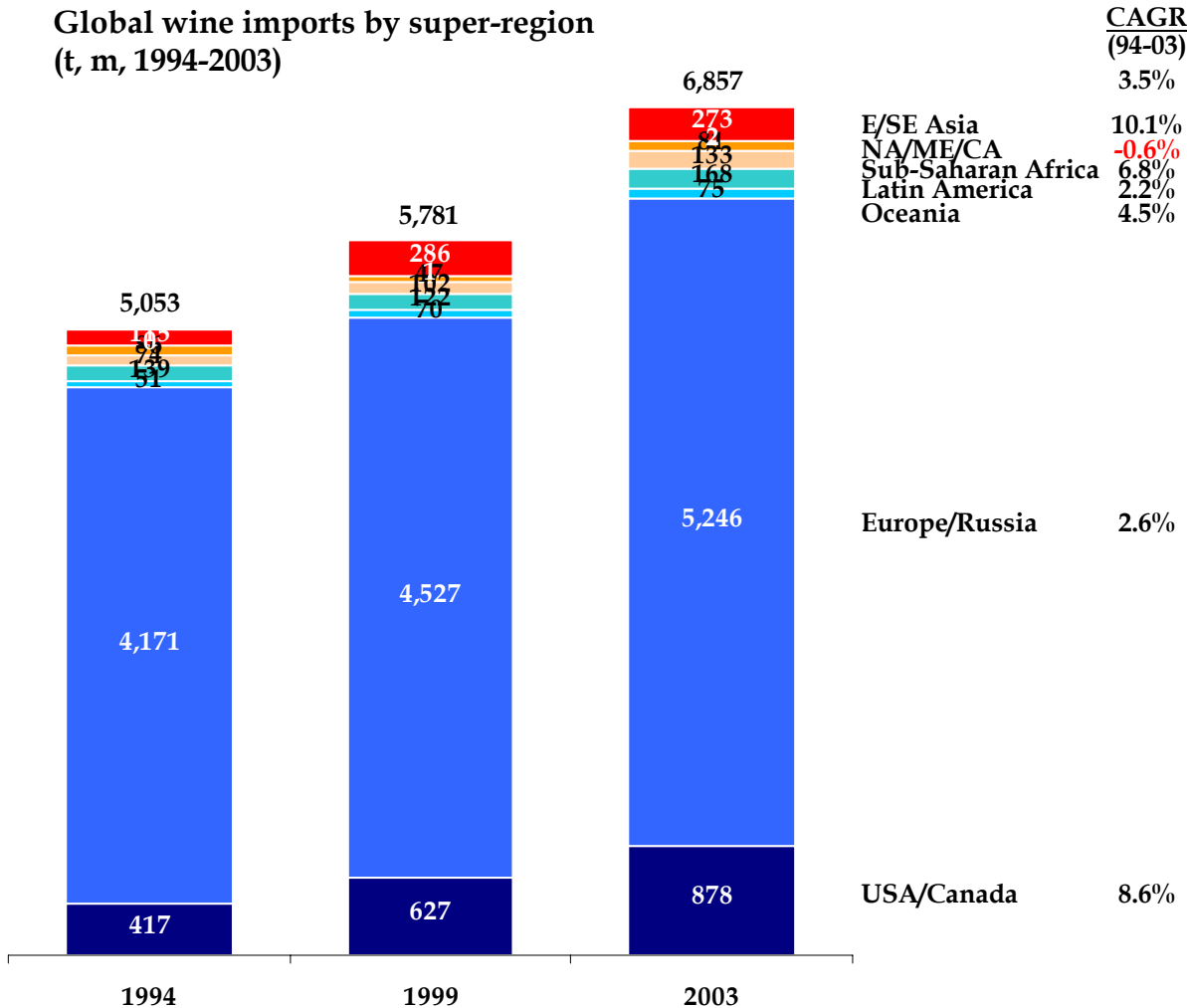
## Notes

- Uses 1994-2002 data as no more recent data by country is currently available

# WINE IMPORT VOLUME BY REGION

While Europe is the world's largest importer of wine, the US/Canada and Asia are showing good growth

Global wine imports by super-region  
(t, m, 1994-2003)



## Discussion Points

- Europe dominates world wine imports (including interregional trade)

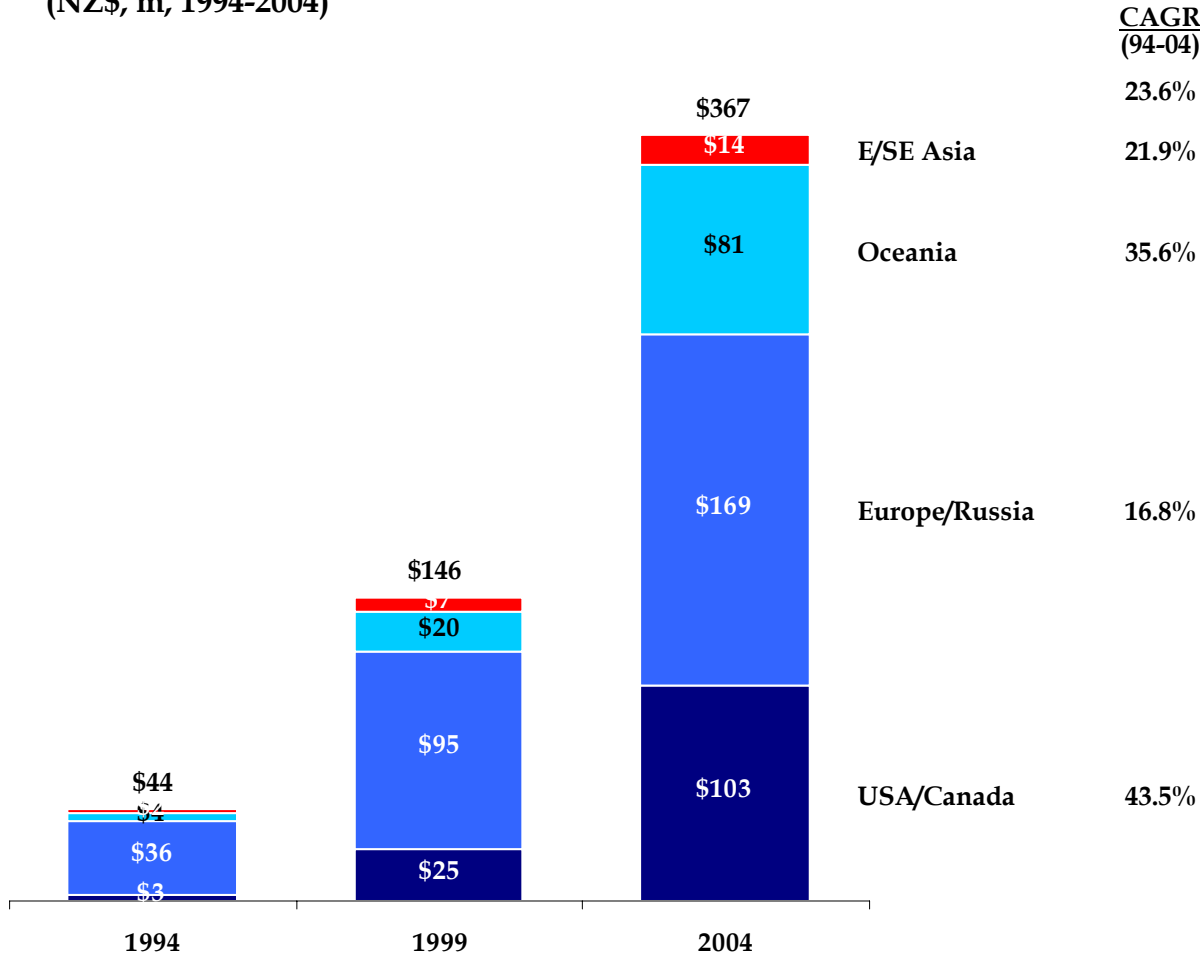
## Notes

- Includes interregional trade (e.g. France to Germany)

# NEW ZEALAND WINE EXPORT VALUE BY DESTINATION

## New Zealand wine exports are up massively in the past decade

New Zealand wine export value by destination  
(NZ\$, m, 1994-2004)



### Discussion Points

- What lessons can the New Zealand food industry learn from the success of wine?
- How sustainable is export sales growth to Australia given it is a major producer?
- Why do we export more wine to Fiji than to France?

### Notes

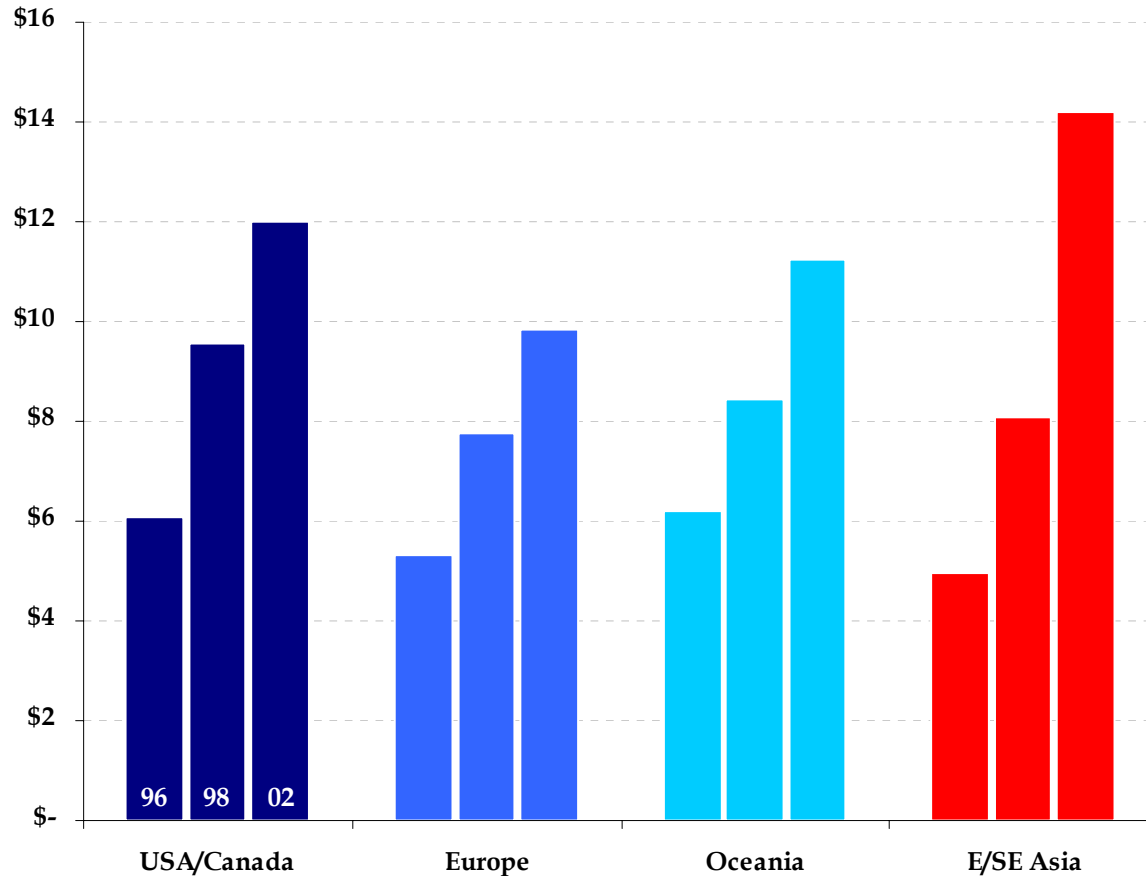
- ~\$3m exports to rest of world in 2004 not shown



# NEW ZEALAND WINE EXPORT VALUE PER LITRE BY DESTINATION

## New Zealand export sales value per litre has shown very strong growth

New Zealand wine export value per lt by destination  
(NZ\$, 1994-2002)



### Discussion Points

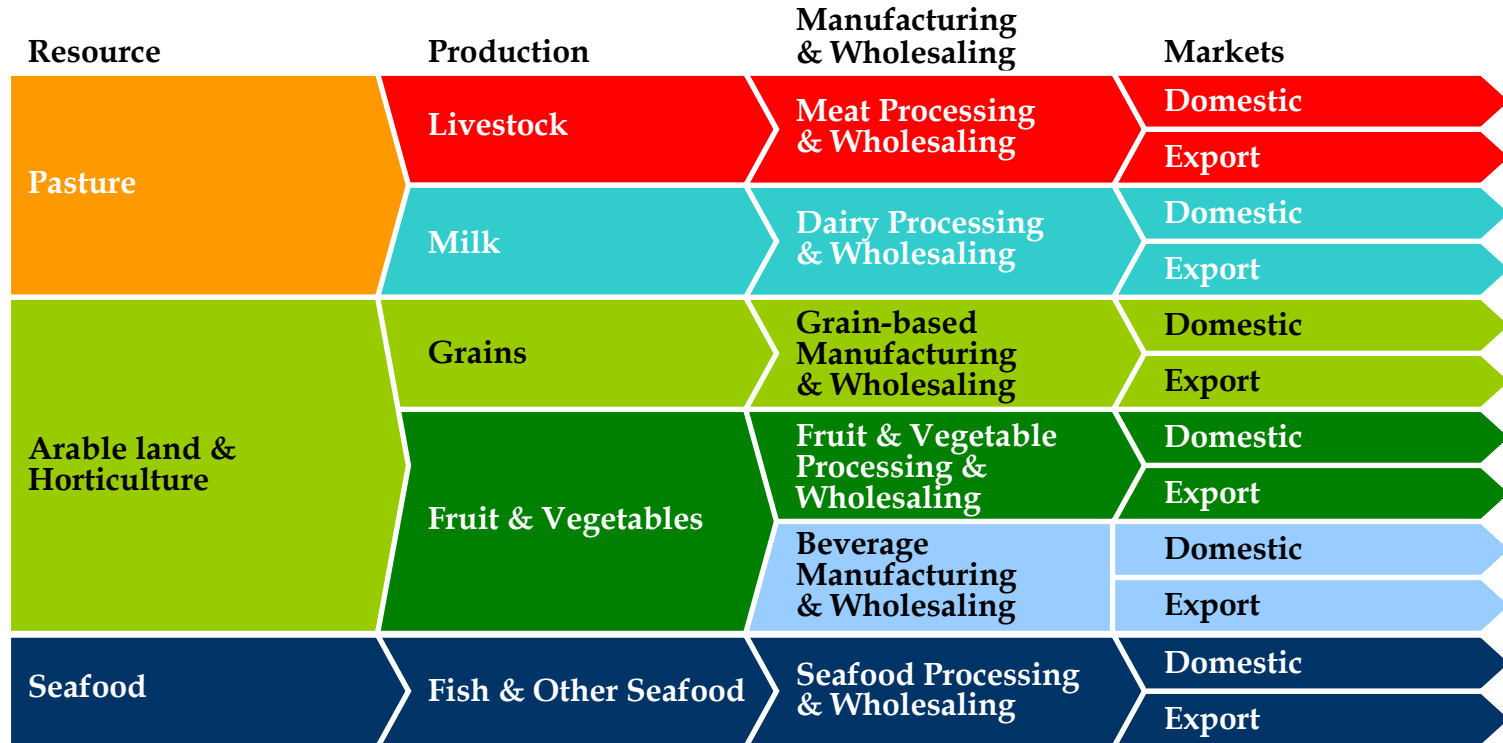
- Why does Asia (Japan) pay significantly more than anywhere else for our wine?
- Why do we get less for our wine in Europe than in the US/Canada or Oceania?

### Notes

- Uses 2002 data as 2003/04 wine volume data is not available

### 3. OCEAN BASED PRODUCTION

The third section of this report looks at ocean based production



## SWOT ANALYSIS - SEAFOOD INDUSTRY

The era of increasing production has ended; the era of increasing value needs to begin

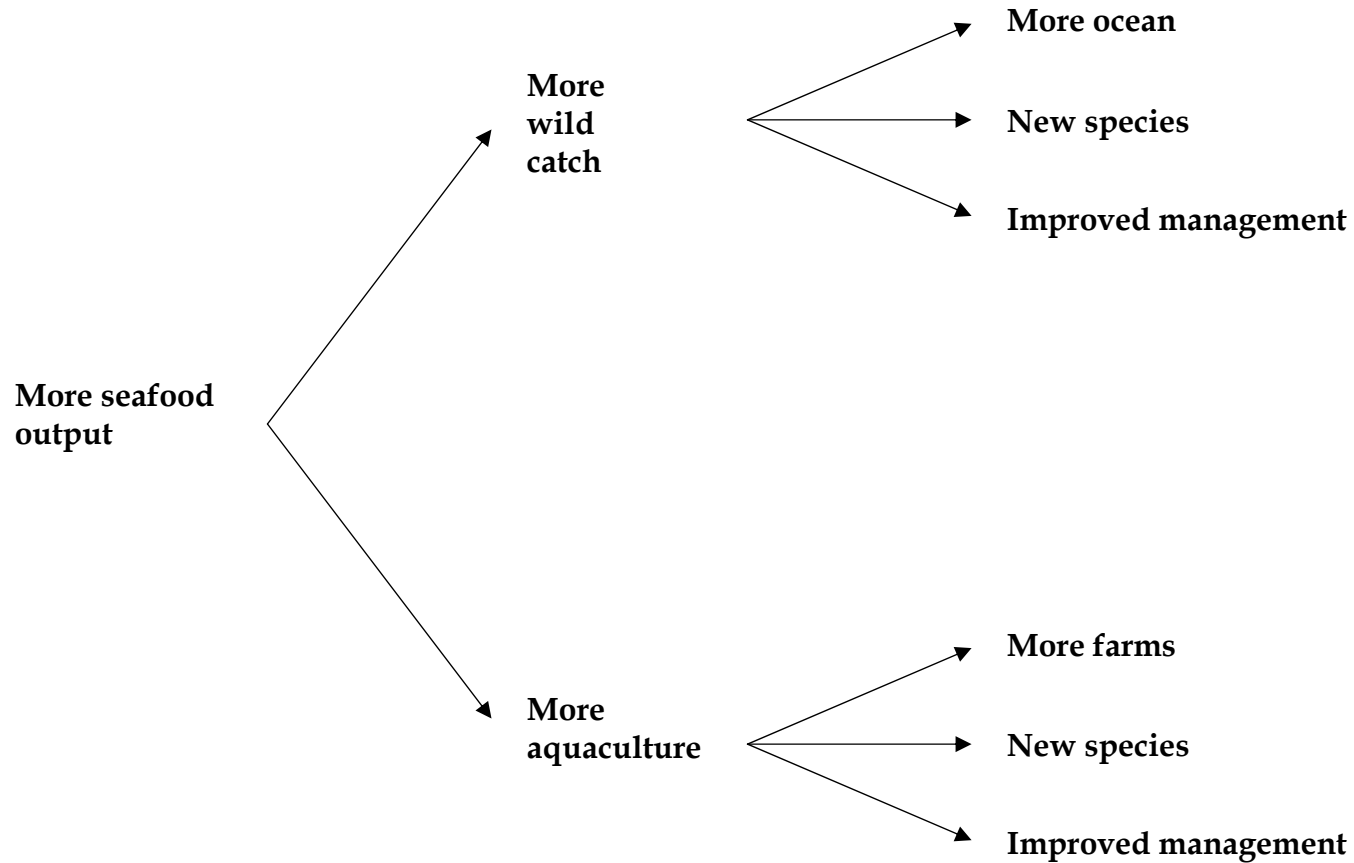
SWOT analysis of New Zealand in global seafood

Strengths	Weaknesses
<p><i>General</i></p> <ul style="list-style-type: none"> <li>- Unsubsidised industry</li> <li>- Clean waters and generally healthy aquatic environment</li> </ul> <p><i>Wild fisheries</i></p> <ul style="list-style-type: none"> <li>- Quota management system providing incentives for sustainability and industry efficiency</li> <li>- Stocks are generally sustainable or rebuilding</li> </ul> <p><i>Aquaculture</i></p> <ul style="list-style-type: none"> <li>- Predictable supply</li> <li>- Track record of innovation and sustained growth</li> </ul>	<p><i>General</i></p> <ul style="list-style-type: none"> <li>- High business compliance costs</li> <li>- Relatively high labour costs/low labour availability</li> <li>- Small producer on global scale</li> </ul> <p><i>Wild fisheries</i></p> <ul style="list-style-type: none"> <li>- Incomplete management regime for non-commercial fisheries</li> <li>- Supply fluctuates with availability of fish</li> </ul> <p><i>Aquaculture</i></p> <ul style="list-style-type: none"> <li>- Hiatus in development caused by moratorium</li> <li>- New regulatory regime contains barriers to development</li> <li>- Reliance on small number of species</li> </ul>
Opportunities	Threats
<p><i>General</i></p> <ul style="list-style-type: none"> <li>- Gradual removal of global fishing subsidies</li> <li>- Health benefits of seafood</li> <li>- Over half of the fish body currently going to meal and waste</li> <li>- Considerable opportunity to move from commodity trading to added value products</li> <li>- Ecolabelling &amp; environmental certification</li> </ul> <p><i>Wild fisheries</i></p> <ul style="list-style-type: none"> <li>- Opportunities beyond New Zealand waters</li> </ul> <p><i>Aquaculture</i></p> <ul style="list-style-type: none"> <li>- Removal of aquaculture moratorium</li> <li>- Potential development in new species</li> <li>- Static global production from wild fisheries</li> </ul>	<p><i>General</i></p> <ul style="list-style-type: none"> <li>- Land-based activities &amp; recreational boating threaten water quality for aquaculture &amp; inshore fisheries</li> </ul> <p><i>Wild fisheries</i></p> <ul style="list-style-type: none"> <li>- Threat to sustainability of fish stocks from unmanaged non-commercial fishing (including amateur fishing and poaching)</li> <li>- Spatial erosion of access to fishing grounds (eg, marine reserves, cable protection zones, non-commercial fishing areas)</li> <li>- Changing societal expectations of environmental performance</li> </ul> <p><i>Aquaculture</i></p> <ul style="list-style-type: none"> <li>- Biotxin and biosecurity events</li> <li>- Uncertainty &amp; high cost of obtaining access to new water space</li> <li>- Competition from low-cost countries (Asia, South America)</li> </ul>

# DRIVERS OF INCREASED SEAFOOD OUTPUT

There are a limited number of drivers of increased seafood output

Key drivers of change in seafood output (model)



## POTENTIAL FOR TRANSFORMATIVE CHANGE

While New Zealand will struggle to increase wild catch, aquaculture has excellent potential

Potential for transformative change in seafood output  
(model)

Objective	Key Driver	Potential for transformative change	Key Issues
More wild catch	More ocean	None	- 200 nautical mile limit already largest in world
	New species	Low	- Potential to develop new species?
	Improved management	Medium	- Most quotas trending down not up indicating continued overfishing - Measurement systems still primitive/basic - Limited scientific understanding/modeling
More aquaculture	More farms	High	- Ending of moratorium - Unclear long-term environmental impact
	New species	Medium	- Constraints on new species importation/development (e.g. carp)
	Improved management	Medium	- More efficient production systems

## RECOMMENDATIONS

Based on our research, we make the following recommendations to the Taskforce

### Recommendations to Food and Beverage Taskforce to increase seafood output

Objective	Issue	Recommendations
More wild catch	Better quota management	1. Focus on increasing sustainable yield over long-term time horizon
	New species	1. Investigate/develop potential markets for currently undervalued fish
More aquaculture	Less regulation	1. Streamline/simplify regulations for development of marine farms
	New species	1. Review Hazardous Substances and New Organisms Act to enable free and open access to non-indigenous species required for continued innovation (no new commercial plant species imported since act introduced (ie 7 years))
	Improved management	1. Ensure we have the best initial aquaculture management training program 2. Explore aquaculture extension program to disseminate best practice

# OVERVIEW - MARINE FISHING & AQUACULTURE

Many of the indicators for the seafood industry are not healthy

Directional trends in marine fishing & aquaculture  
(growth or decline)

	Wild Fishing	Aquaculture	Seafood Processing
Number of vessels	▼	n/a	n/a
Number of enterprises	▲	▲	▼
Employment	▼	▼	▲
Catch/Production	▼	▲	n/a
Turnover	=	▲	▲

## Discussion Points

- Industry undergoing consolidation?

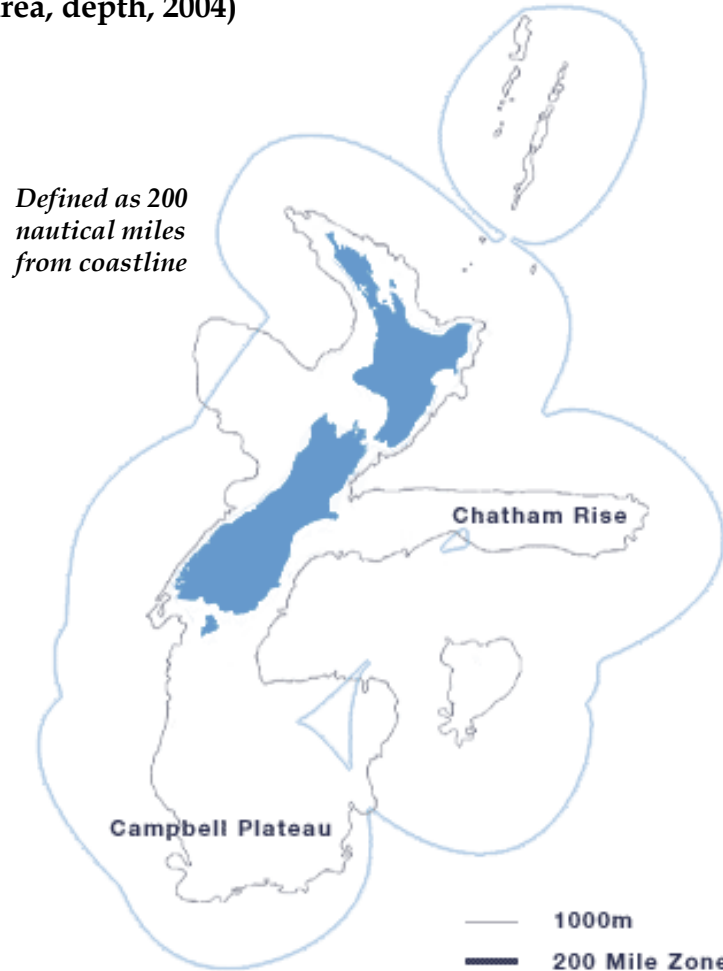
## Notes

- n/a = not available or not applicable
- Definitions and details available on relevant pages
- Differing time periods
- Use with caution; should be treated as directional; different surveys; different methods; different definitions
- Details available on specific pages

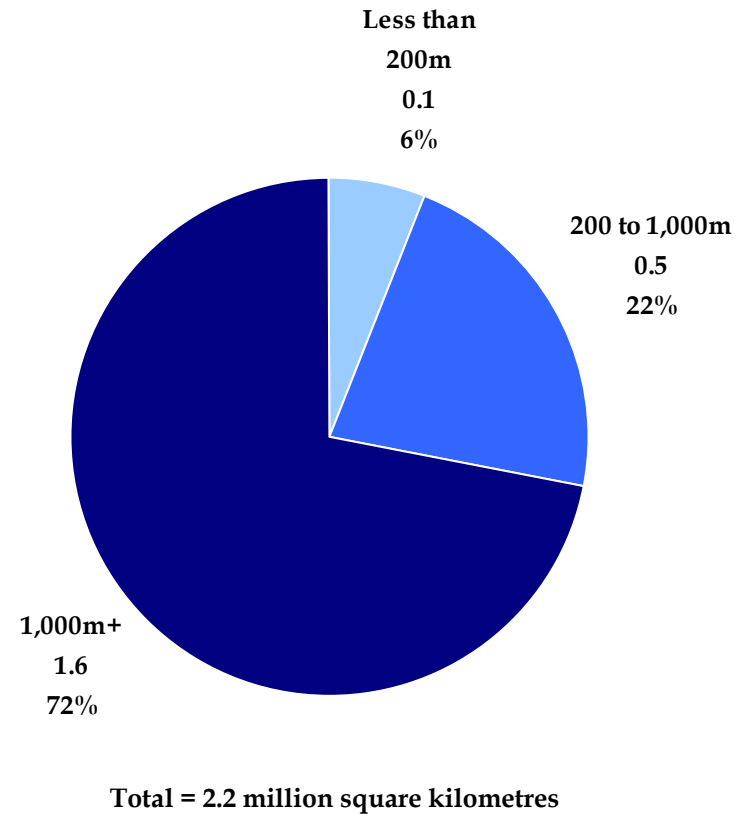
## NEW ZEALAND FISHERIES AREA

The New Zealand Exclusive Economic Zone (EEZ) encompasses 2.2 million square kilometres; unfortunately much of this is relatively unproductive deep water over 1,000m

Limit of Exclusive Economic Zone (EEZ)  
(area, depth, 2004)



Area of EEZ by depth  
(% of area, km<sup>2</sup>, 2004)

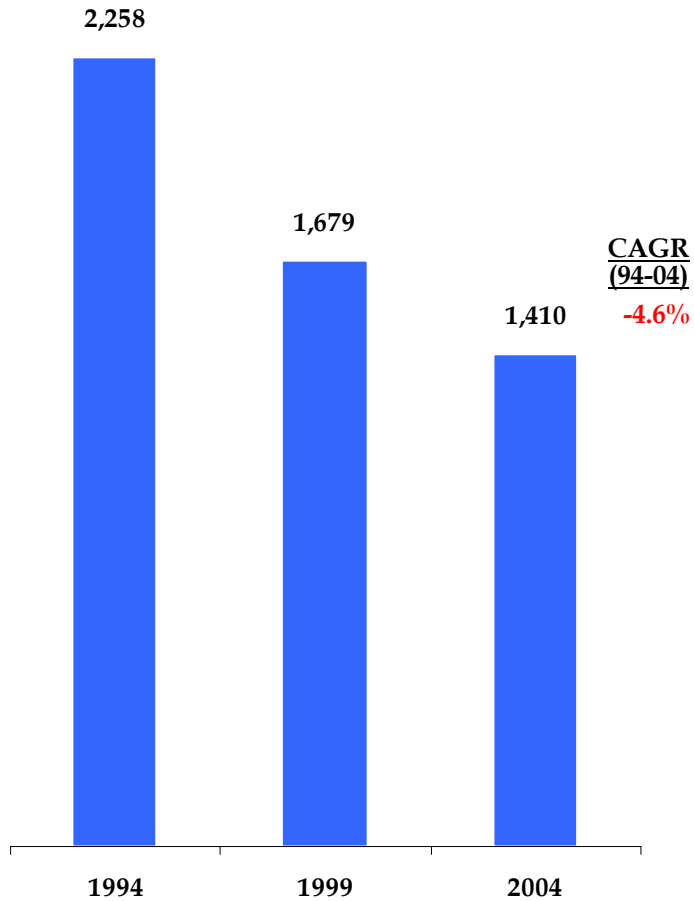




# NUMBER OF ACTIVE FISHING PERMITS

The number of active fishing permits has declined sharply

Number of active fishing permits  
(permits, actual, 1994-2004)



## Discussion Points

- Drivers of consolidation

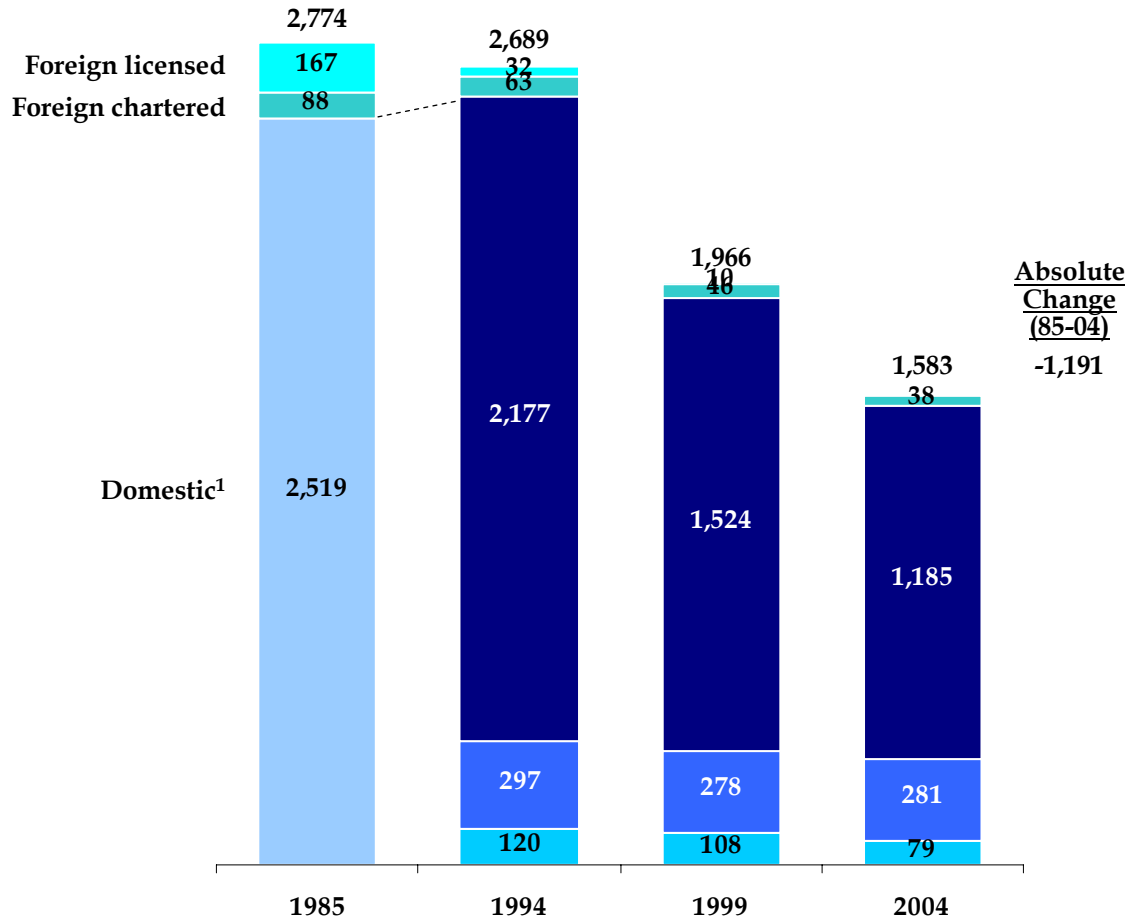
## Notes

- Only those fishing permits that submitted an actual commercial catch return

# NUMBER OF COMMERCIAL FISHING VESSELS

The number of commercial fishing vessels has declined sharply in the past decade

Number of commercial fishing vessels by size and/or origin (vessels, actual, 1985-2004)



### Discussion Points

- Drivers of consolidation

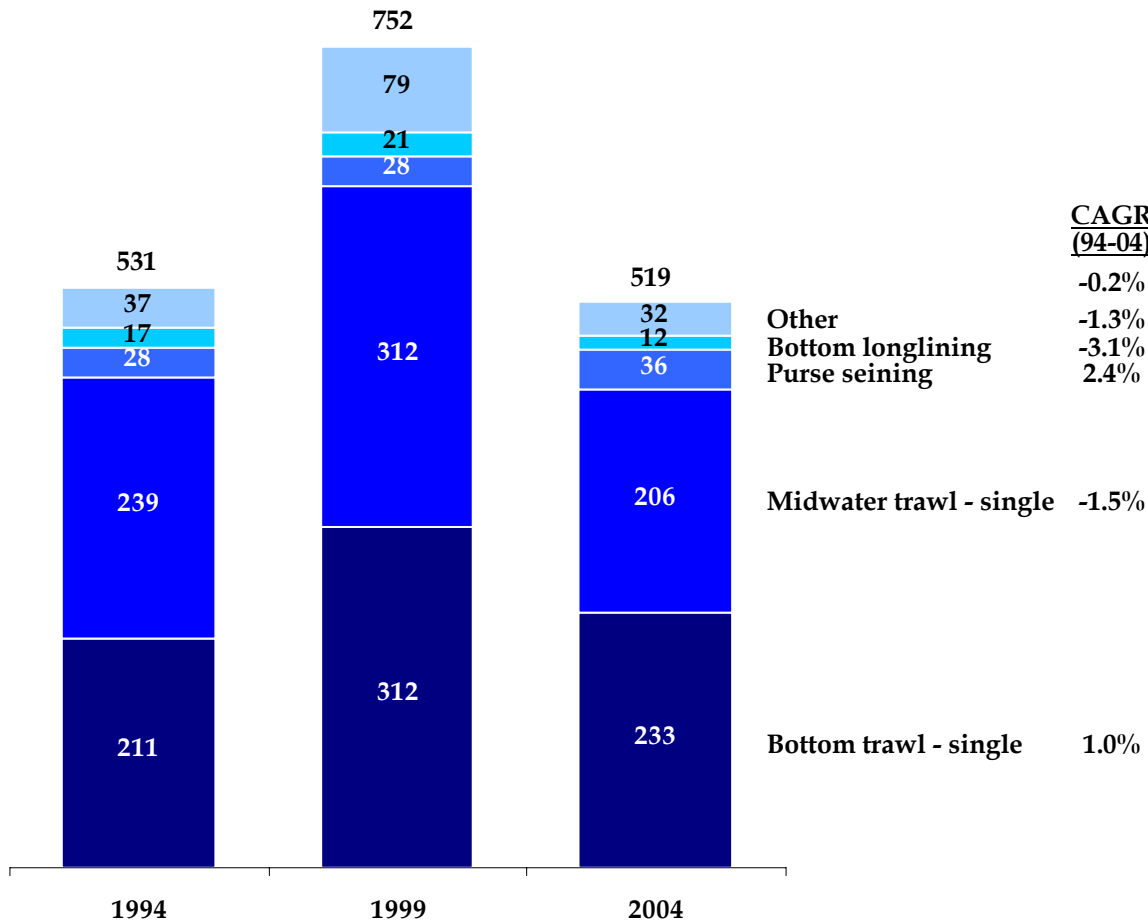
### Notes

- Data was restricted to vessels that reported fishing by submitting a commercial catch return during the calendar year, excluding the monthly nil returns.
- The vessels overall length comes from the latest record in the MOF vessel database for the vessel for that year.

# CATCH BY FISHING METHOD

Most fish are caught with two fishing methods, bottom and midwater trawling

Total catch by fishing method  
(tonnes, m, 1994-2004)



## Discussion Points

- Strengths and weaknesses of trawling (85%+ of catch)

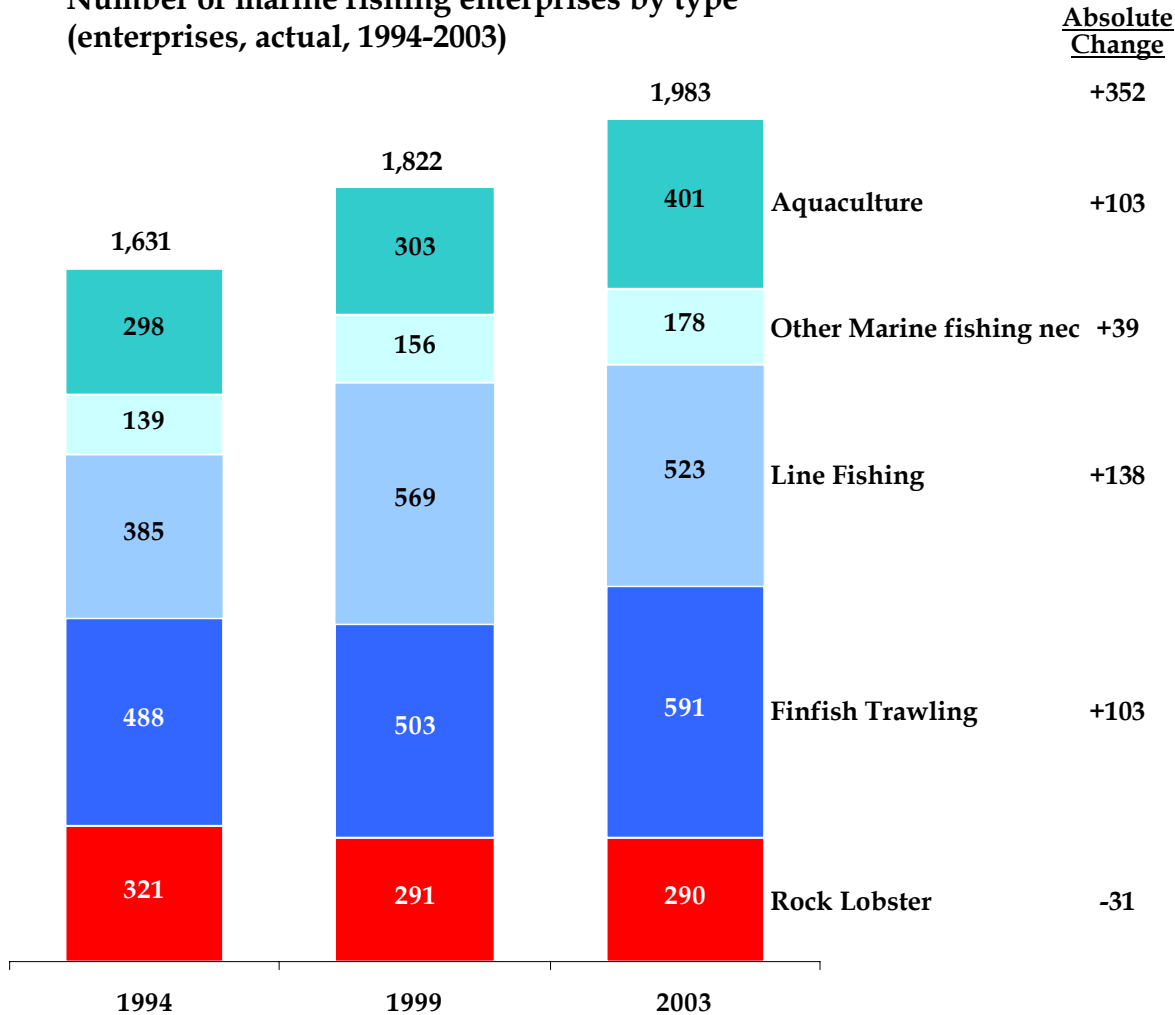
## Notes

- Recognised data variation with other sources
- Represents at sea estimate (not on shore estimate of greenweight) and is not comparable with other data (i.e. landed catch)

# NUMBER OF MARINE FISHING ENTERPRISES

## The number of marine fishing enterprises is increasing

Number of marine fishing enterprises by type (enterprises, actual, 1994-2003)



### Discussion Points

- Are these quota holders rather than actual fishermen?

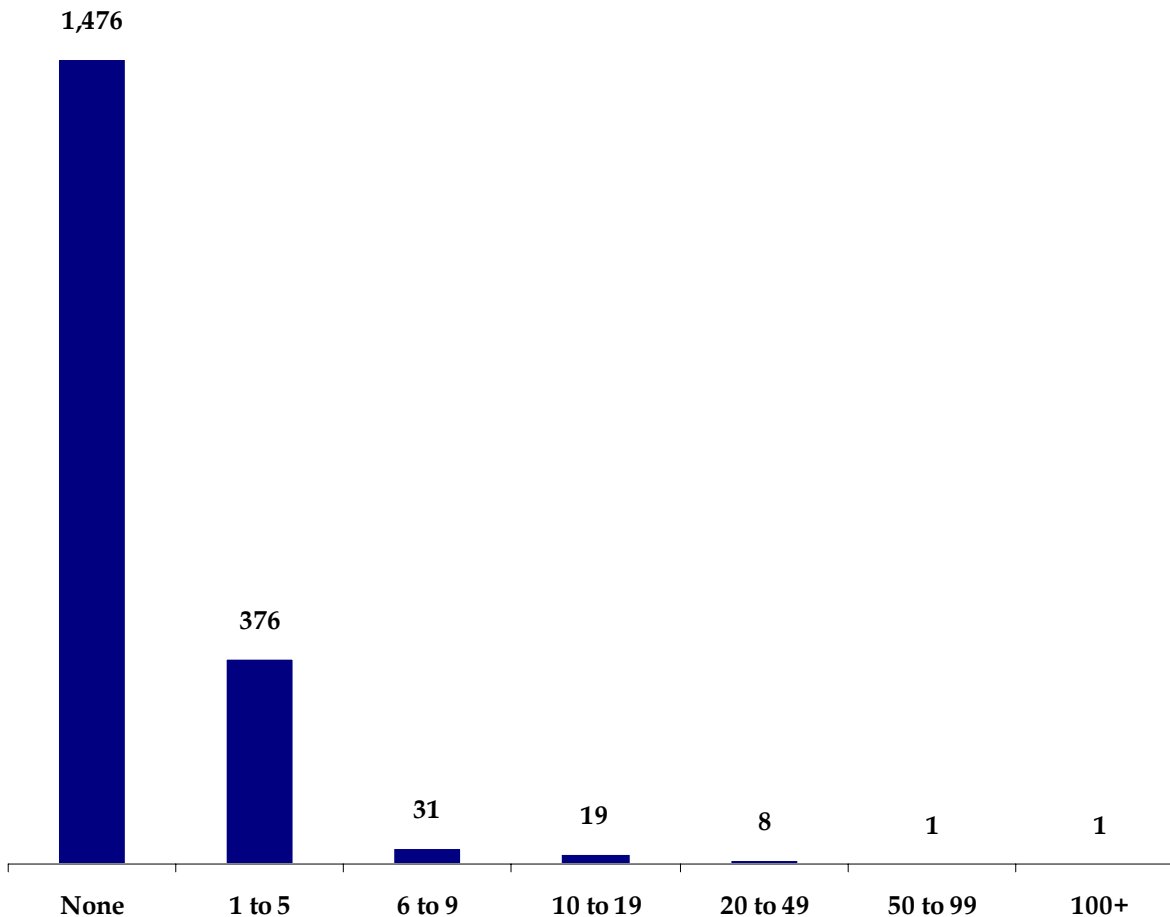
### Notes

- Enterprises registered for GST purposes (over \$30,000 turnover)

## NUMBER OF ENTERPRISES BY NUMBER OF EMPLOYEES

Most marine fishing enterprises are run by working proprietors and have no employees

Number of marine fishing enterprises by employment size  
(enterprises, actual, 2004)



### Discussion Points

- Why?
- Quota holders or contractors?

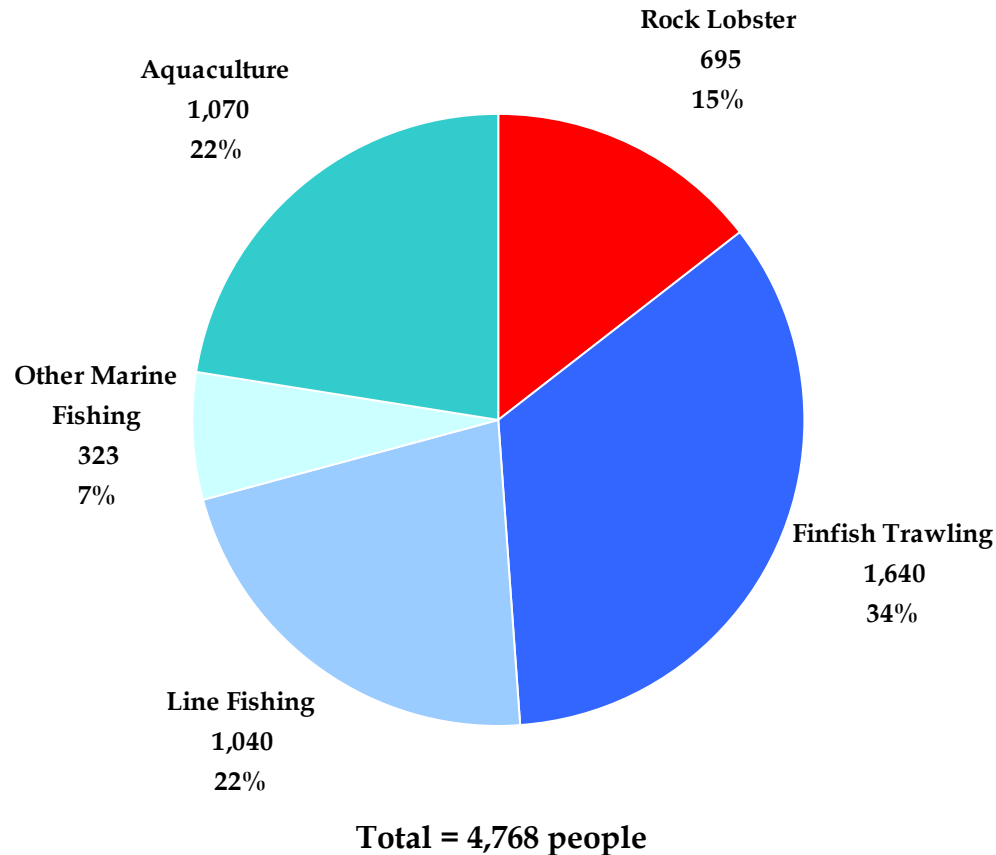
### Notes

- Uses 2004 data which does not capture working proprietor (i.e. including # employees = none)
- Enterprises registered for GST purposes (over \$30,000 turnover)

# NUMBER OF PEOPLE WORKING IN MARINE FISHING

## Marine fishing employs under 5,000 people

Number of marine fishing employees by type  
(people, actual, 2003)



### Discussion Points

- Relative productivity by sector

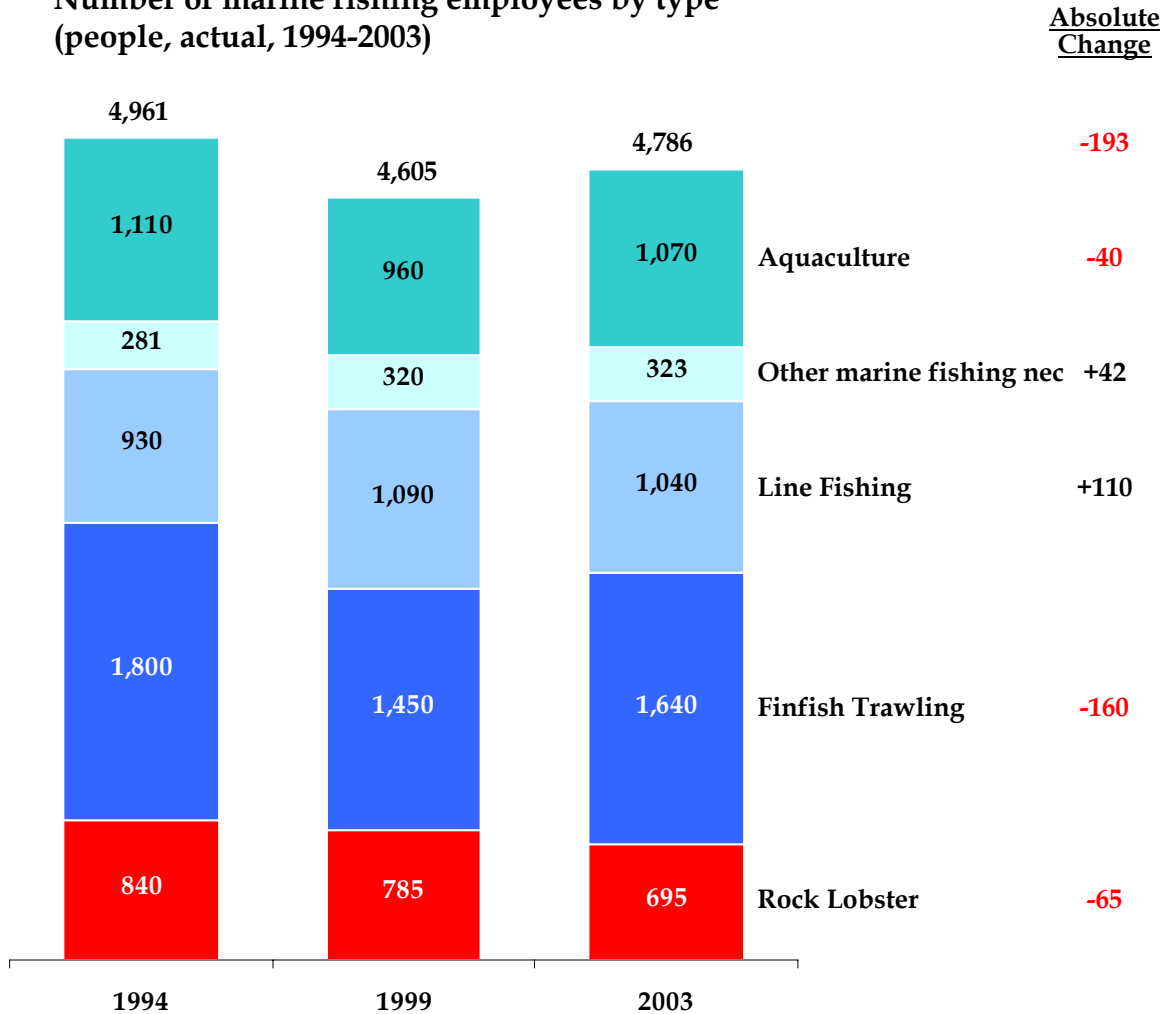
### Notes

- Uses 2003 data as this includes working proprietors
- Total employees not FTE
- May not totally account for seasonal workers

# NUMBER OF PEOPLE WORKING IN MARINE FISHING

The total number of people employed in marine fishing is going nowhere

Number of marine fishing employees by type (people, actual, 1994-2003)



### Discussion Points

- Expectations of future levels of employment

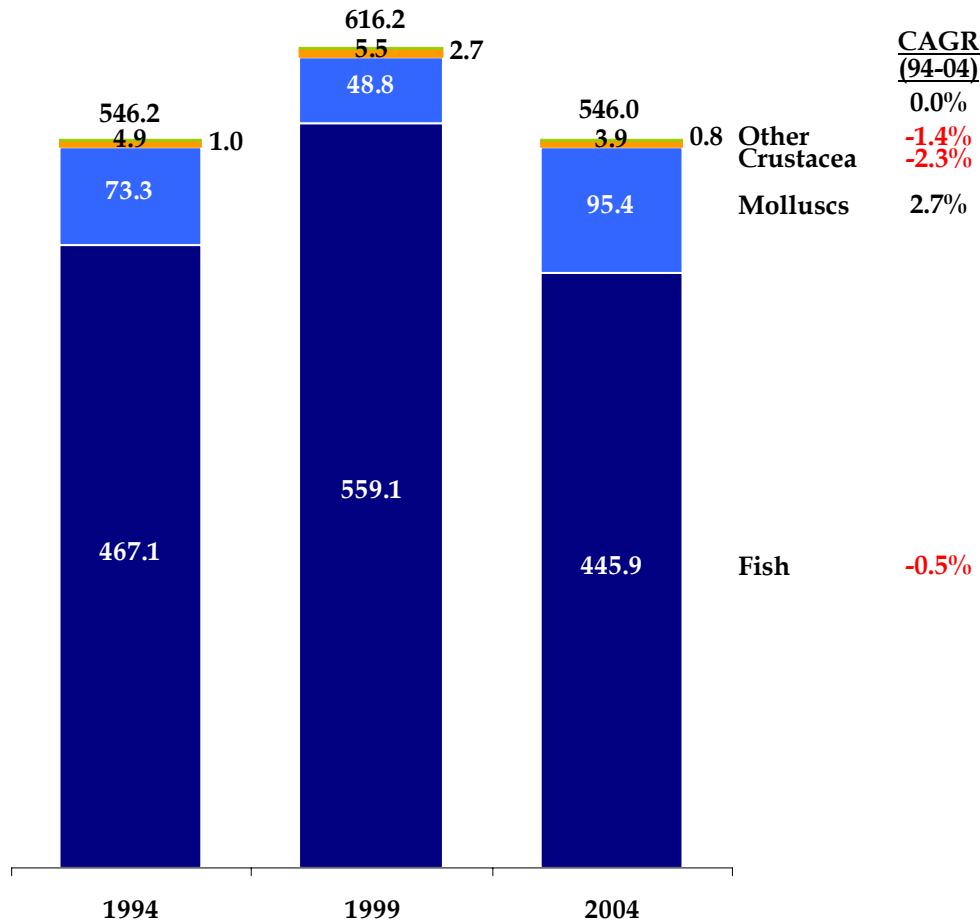
### Notes

- Includes working proprietors
- Total employees not FTE
- May not totally account for seasonal workers

# TOTAL LANDED SEAFOOD CATCH

The total seafood catch is no higher than it was a decade ago, with only molluscs showing growth

Total landed catch by species class  
(tonnes, thousands, 1994-2004)



## Discussion Points

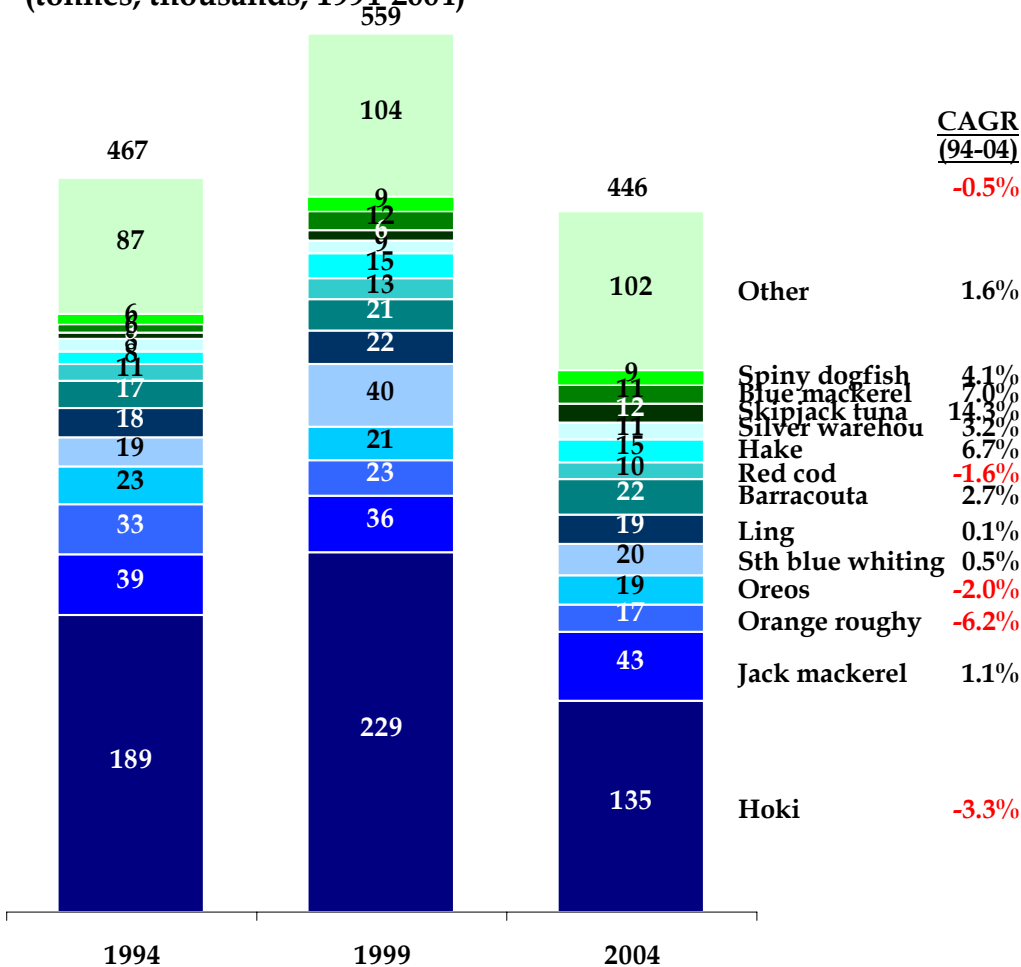
- Is this it? Is 546,000 tonnes all the fish we can ever catch in New Zealand waters?
- Implications



# TOTAL LANDED FISH CATCH

Total fish catch is down, driven by declining quotas on previously overfished species (e.g. orange roughy)

Total landed fish catch by species  
(tonnes, thousands, 1994-2004)



## Discussion Points

- Cause of decline since 1999

## Notes

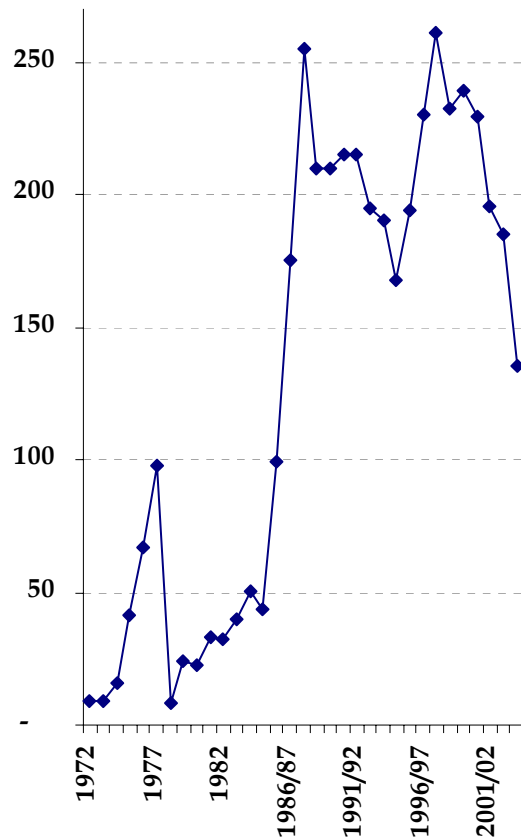
- Greenweight (i.e. the weight of the whole fish back calculated from the weight of the fish product when it was landed)

# LANDED CATCH FOR SELECT MAJOR SPECIES

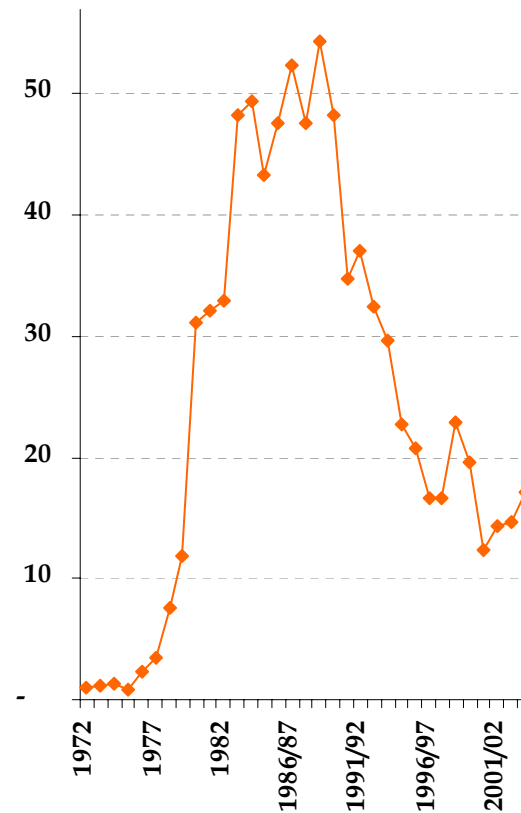
## Hoki and Orange Roughy demonstrate the boom and bust cycle of overfishing

Total landed fish catch by select species  
(tonnes, thousands, 1972-2004)

### Hoki



### Orange Roughy



### Discussion Points

- Lessons learned
- Prognosis?

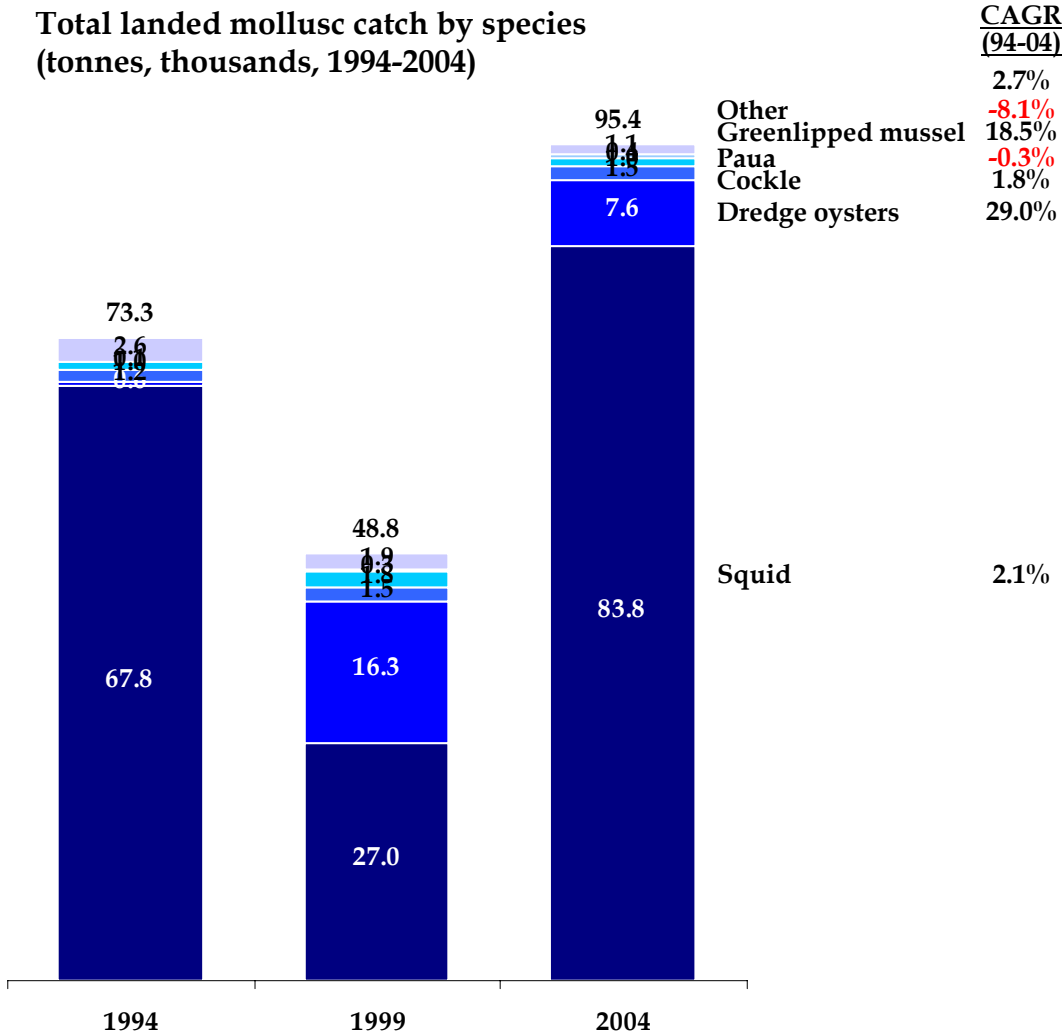
### Notes

- Greenweight (i.e. the weight of the whole fish back calculated from the weight of the fish product when it was landed)

# TOTAL LANDED MOLLUSCS CATCH

Squid is the primary mollusc caught, however the catch varies significantly

Total landed mollusc catch by species  
(tonnes, thousands, 1994-2004)



## Discussion Points

- Causes of variation in squid catch; long term sustainable catch

## Notes

- Greenweight (i.e. the weight of the whole fish back calculated from the weight of the fish product when it was landed)

# TOTAL LANDED CRUSTACEA CATCH

## The crustacea catch is down

Total landed crustacea catch by species  
(tonnes, actual, 1994-2004)



### Discussion Points

- Cause of decline since 1999

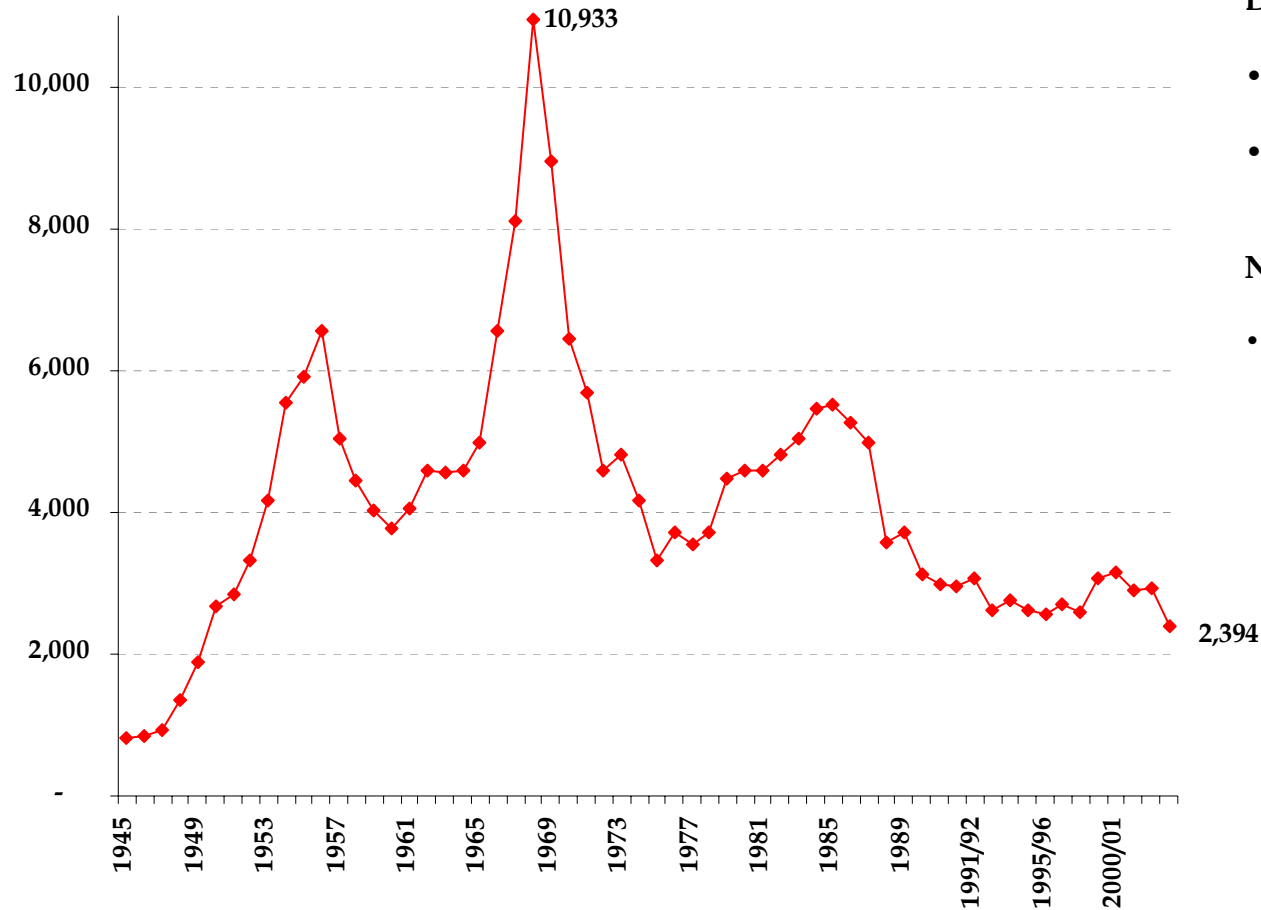
### Notes

- Greenweight (i.e. the weight of the whole fish back calculated from the weight of the fish product when it was landed)

# LANDED CATCH FOR SPINY RED ROCK LOBSTER

## Spiny red rock lobster demonstrate the boom and bust cycle of overfishing

Total landed spiny red rock lobster catch (tonnes, actual, 1945-2004)



### Discussion Points

- Lessons learned
- What is sustainable?

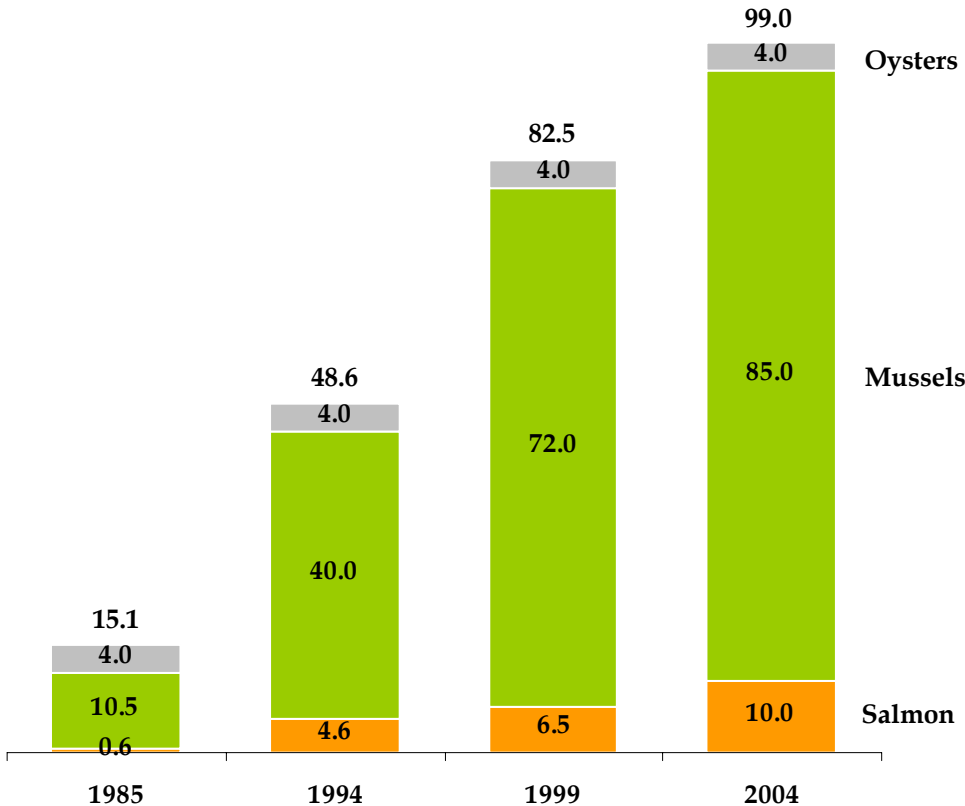
### Notes

- Greenweight (i.e. the weight of the whole fish back calculated from the weight of the fish product when it was landed)

# COMMERCIAL AQUACULTURE HARVEST

Aquaculture is the shining star of the seafood industry, however growth has slowed recently

Commercial aquaculture harvest  
(tonnes, thousands, 1985-2004)



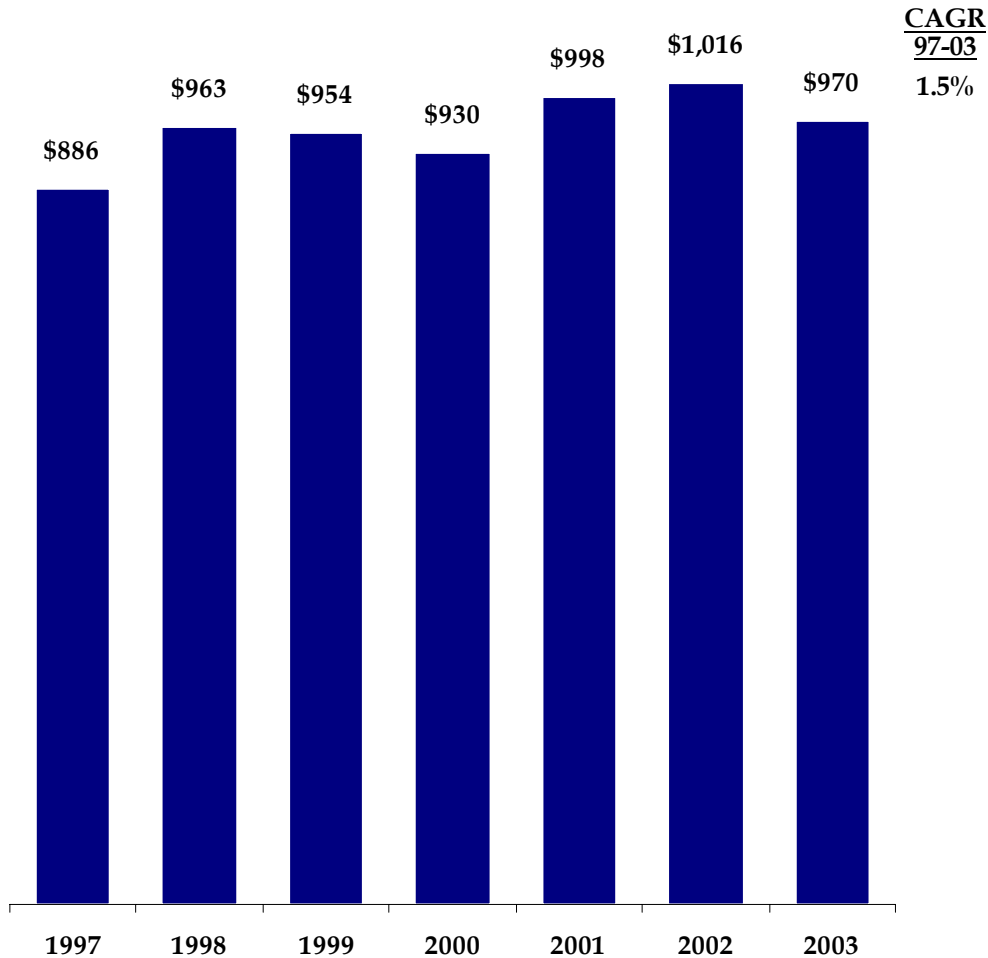
## Discussion Points

- Ultimate potential of aquaculture
- Role of moratorium in slowing growth recently
- Limits on growth

## TURNOVER GROWTH - FISHING

Fishing enterprise turnover hasn't shown any real growth since 1997

Total fishing enterprise turnover  
(dollars, millions, 1997-2003)



### Discussion Points

- Why?

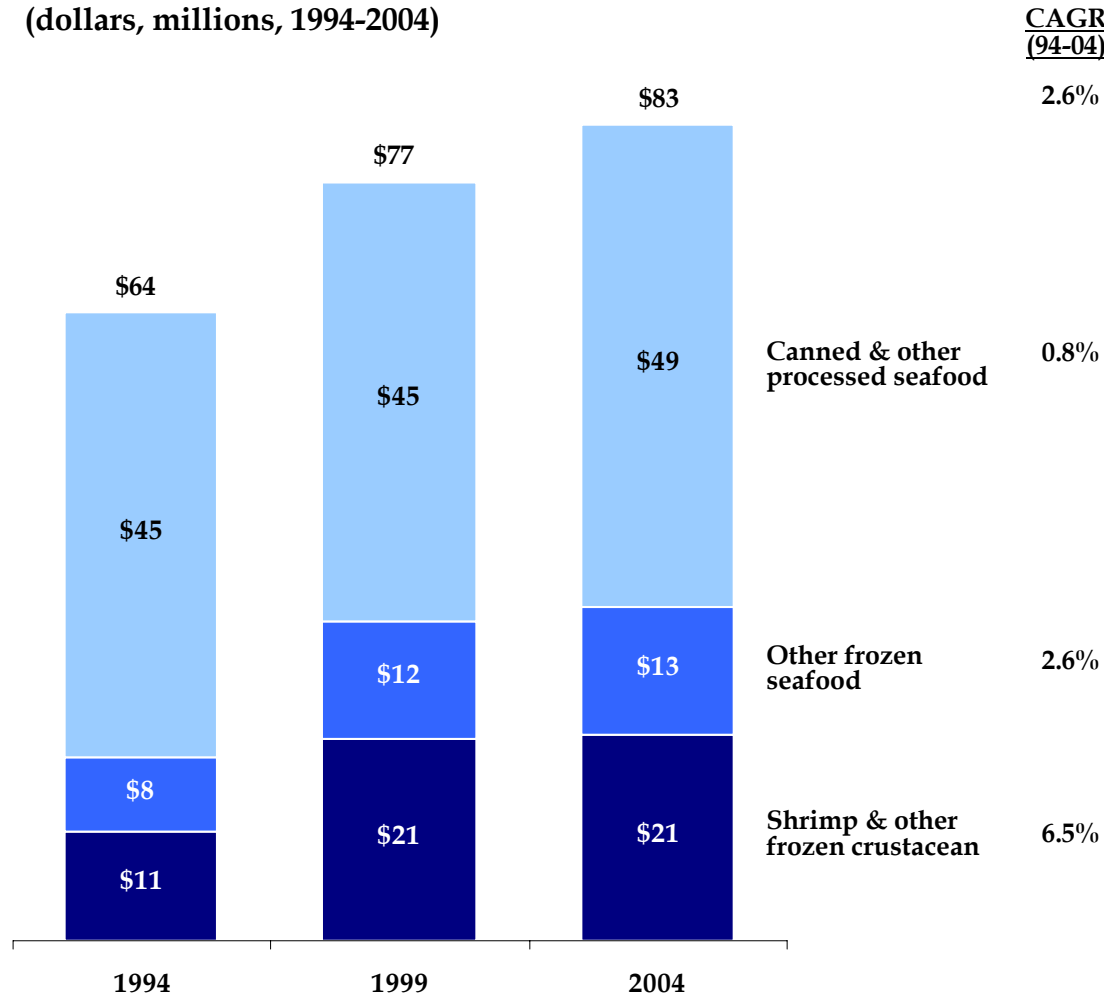
### Notes

- AES 2004 data not yet available
- Actual dollars; not inflation adjusted (i.e. decline in real terms)
- Defined as ANZSIC A04 Fishing

# SEAFOOD IMPORTS

Seafood imports are showing minimal growth, primarily frozen shrimp

Seafood imports  
(dollars, millions, 1994-2004)



### Discussion Points

- Growth of shrimp

### Notes

- Definitions
  - Crustacean (HS0306)
  - Other frozen fish (remainder of HS03)
  - Processed seafood (HS1603-1605)
- Actual NZ dollars; not inflation adjusted



## INDUSTRY STRUCTURE - SEAFOOD PROCESSING

The structure of the seafood processing sector is different

- Mixed ownership structure of key players:
  - Aotearoa Fisheries, a government-created mega-holding of Maori fishing interests
    - established to maximise the value of Māori fisheries assets for the benefit of its iwi and Māori shareholders; Te Ohu Kaimoana is the sole voting shareholder
    - established under the Māori Fisheries Act 2004 - holds around half the total value of the Māori fisheries assets and is estimated to be worth at least \$350 million
  - Sealord, half owned by Nippon Suisan Kaisha (Japan; sales US\$4.7b) and half owned by Aotearoa
  - Sanford, a publicly listed company controlled by Amalgamated Dairies (NZ)
  - Five large-to-medium private, family-owned companies (Talley's, Independent, United, Solander, Vela)
- Inputs (catch) is highly government regulated and controlled
  - Individual Transferable Quota (ITQ), the right to catch certain fish, were assigned in the past by Government in perpetuity to various individuals and entities for various reasons. Many of the owners of ITQ do not themselves fish. The Ministry of Fisheries generates the Total Allowable Commercial Catch (TACC) for all quota species by Fishery Management Areas (FMAs) within the Exclusive Economic Zone (EEZ) for the year. The TACC, crossed with the ITQ, which is tradable, generates Annual Catch Entitlement (ACE), which is also tradable. Commercial fishing requires a fishing permit, but you can fish without ACE, by buying ACE after you have caught fish. If you don't have ACE to cover your catch by the end of the year, you pay a monetary penalty to the government.
- Growing direct ownership of mussel farms and other aquaculture by major players (vertical integration)

## KEY COMPANIES - SEAFOOD

The major players in seafood processing are an Iwi-owned mega-group (Aotearoa/Sealord), a publicly listed company (Sanford) and five family-owned private companies

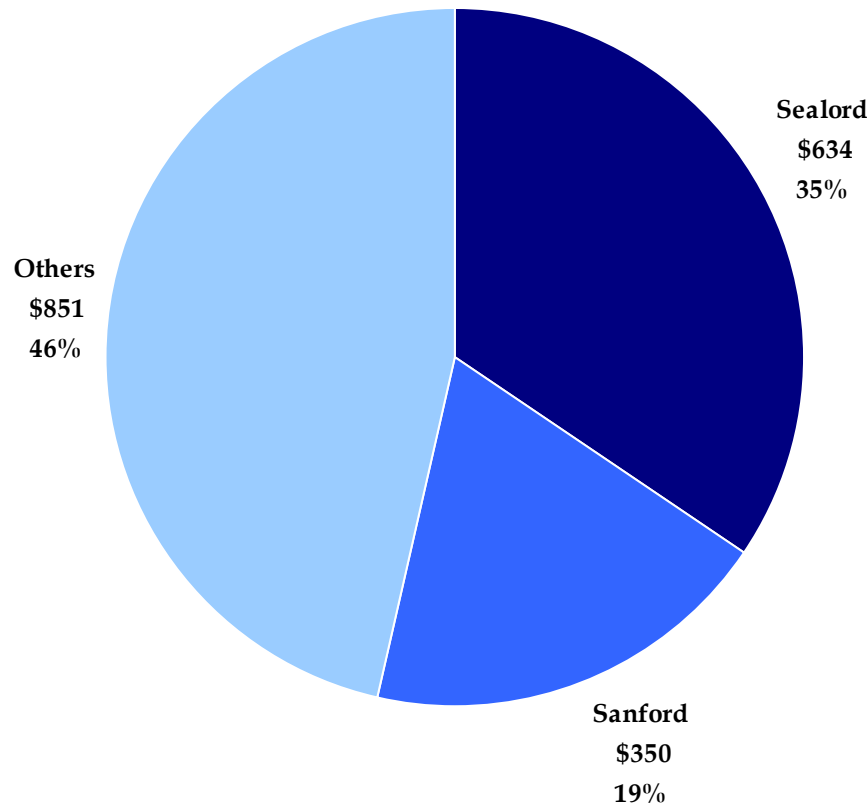
Key companies in the seafood processing and wholesaling sector

Company	Turnover (NZ\$; m; 2004)	Employees	Ownership	Activities
Aotearoa Fisheries	~\$600	3,000	New Zealand Iwi/Te Ohu Kaimoana	<ul style="list-style-type: none"> <li>- Aotearoa Fisheries has a 50% shareholding in Sealord and Prepared Foods; and 100% ownership of Moana Pacific Fisheries, Chatham Processing, Pacific Marine Farms and Prepared Foods Processing</li> <li>- Equity value=\$350m</li> </ul>
Sealord Group	\$634	1,600	NZ/Japan Iwi/Public	<ul style="list-style-type: none"> <li>- Processing and marketing of seafood</li> <li>- 50% owned by Aotearoa Fisheries; 50% Nippon Suisan (Japan; also 25% of Anzco meat)</li> </ul>
Sanford	\$350	1,287	New Zealand Public Listed	<ul style="list-style-type: none"> <li>- Processing and marketing of seafood</li> <li>- 38% owned by Amalgamated Dairies (NZ)</li> </ul>
Talley's	?	500+250	New Zealand Private	<ul style="list-style-type: none"> <li>- Processing and marketing of seafood, ice cream and frozen vegetables</li> <li>- 85,000t; 10 trawlers/vessels; 4 fish factories; 3 other</li> </ul>
Independent Fisheries	?	400	New Zealand Private	<ul style="list-style-type: none"> <li>- Processing and marketing of seafood</li> <li>- 25,000t; 6 deep-sea trawlers; 1 plant (3 processing lines)</li> </ul>
United Fisheries	?	200 <sup>1</sup>	New Zealand Private	<ul style="list-style-type: none"> <li>- Processing and marketing of seafood</li> <li>- Trawlers; 1 factory; owns mussel farms</li> </ul>
Solander Fisheries	?	10 <sup>1</sup>	New Zealand Private	<ul style="list-style-type: none"> <li>- Processing and marketing of seafood</li> <li>- 20% owned by Talley's</li> </ul>
Vela Fishing	?	8 <sup>1</sup>	New Zealand Private	<ul style="list-style-type: none"> <li>- Processing and marketing of seafood</li> </ul>

## SEAFOOD - MARKET SHARE

Two companies, Sealord and Sanford, account for 54% of seafood processing

New Zealand seafood sales market share  
(% of sales; 2004)



### Discussion Points

- Who is driving product innovation?

### Notes

- Sealord is 50% owned by Aotearoa Fisheries and 50% Nippon Suisa Kaisha (Japan)
- Aotearoa Fisheries control an additional ~\$136m in sales outside Sealord

## ACQUISITIONS - SEAFOOD

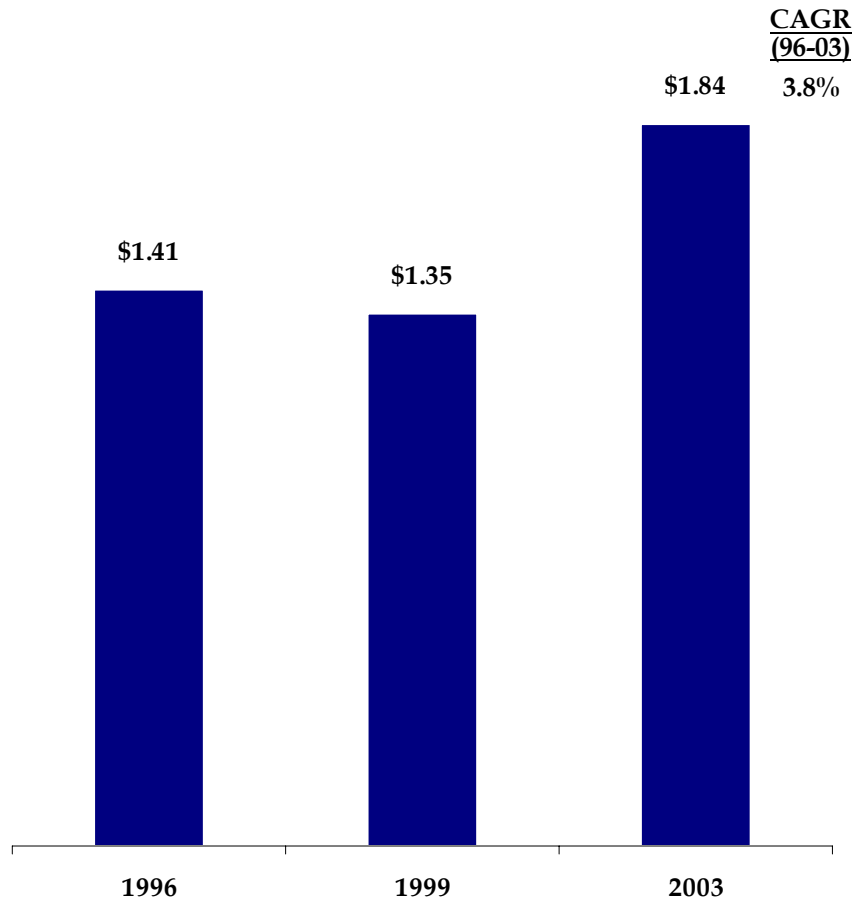
There have been a number of major acquisitions in the seafood sector recently

Acquiror	Acquiree	Date	Notes
Paramount Foods (So Natural Foods)	Brunswick (in NZ AU)	Apr 2005	Ambient Seafood business for \$11m
Aotearoa Fisheries	Sealord (50%) Prepared Foods (50%) Moana Pacific Fisheries, Chatham Processing, Pacific Marine Farms	Jan 2004	Maori Fisheries mega-corporation formed Equity value of \$350m
Talley's	Amatal	Dec 2004	Acquired other 50% of joint-venture from Amalgamated Dairies (NZ)
Sanford Ltd	Simunovich Fisheries	Oct 2004	Fishing assets, including Ocean Fresh Fisheries (Australia) in \$137m deal
Sanford Ltd	Weihai Dong Foods (China)	Sept 2004	25% of seafood processing company in China
So Natural Foods (Au)	Paramount Seafoods	Jun 2003	Soy and Seafood - functional foods with \$20m

# SEAFOOD PROCESSING TURNOVER GROWTH

The seafood processing sector is not delivering on significant growth

Seafood processing turnover  
(dollars, millions, 1996-2003)



### Discussion Points

- How to achieve growth significantly in excess of inflation

### Notes

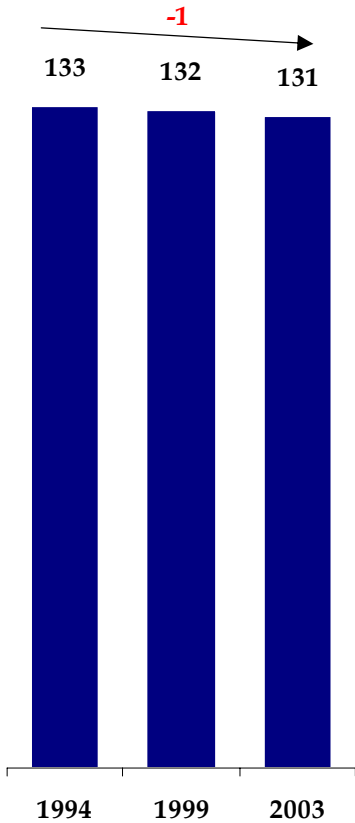
- Processing turnover only; no separate data availability in AES on seafood wholesale; No data available prior to 1996 (AES); 2004 data not yet available

# SEAFOOD MANUFACTURING

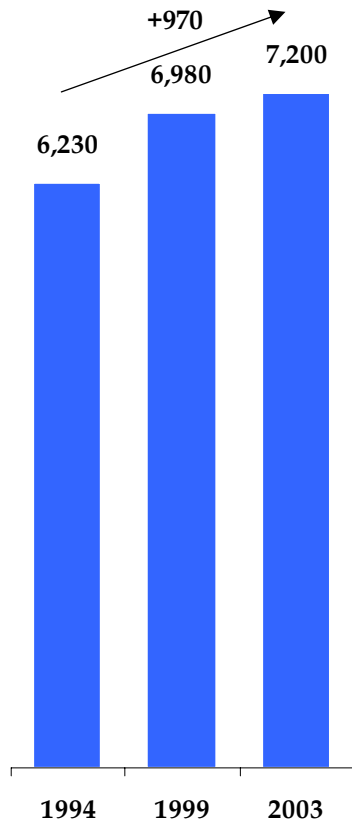
While the number of seafood manufacturing enterprises is flat, employment is up

Seafood manufacturing statistics  
(enterprises, employees, actual, 1994-2003)

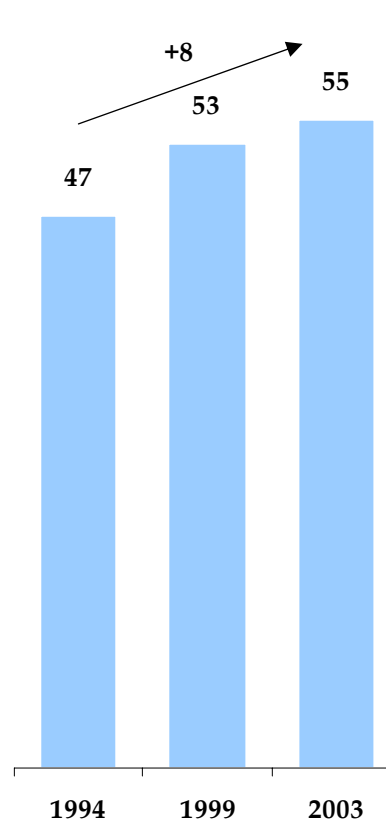
Enterprises



Employees



Employees/Enterprise



Discussion Points

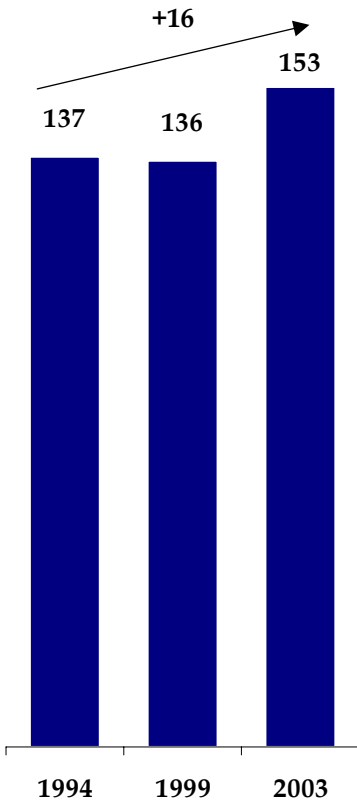
- What is driving employment growth?

# SEAFOOD WHOLESALING

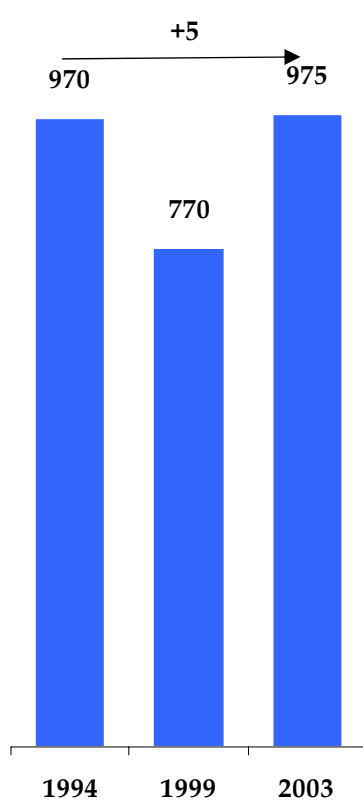
There has been no significant growth or decline in seafood wholesaling over the past decade

Seafood wholesaling statistics  
(enterprises, employees, actual, 1994-2003)

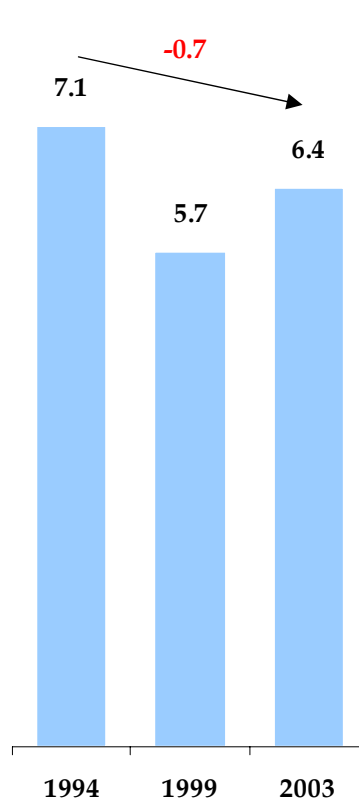
Enterprises



Employees



Employees/Enterprise



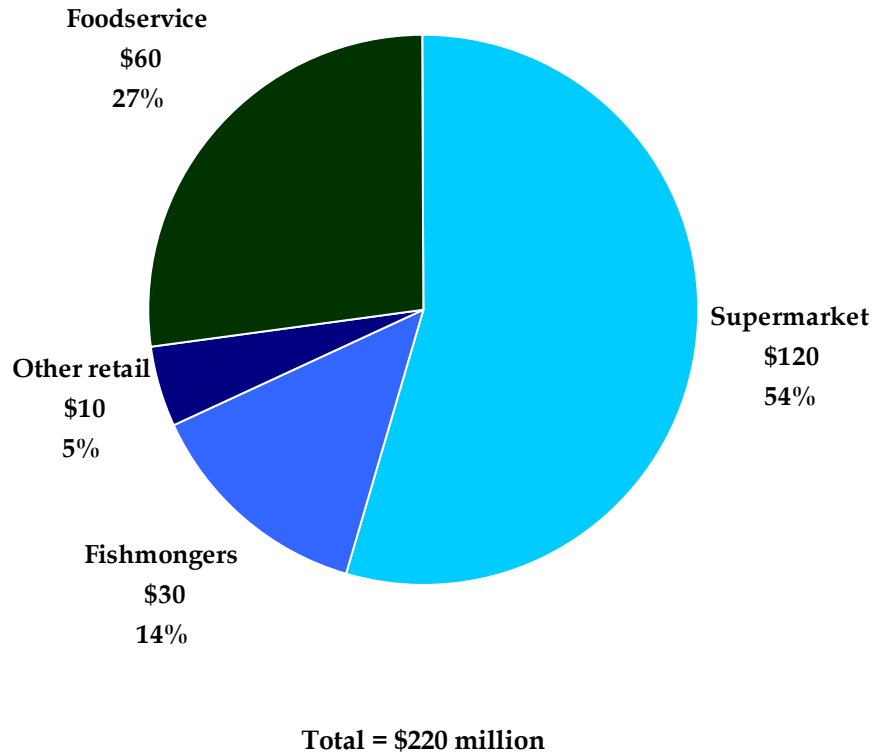
Discussion Points

- Role of wholesalers going forward

## DOMESTIC MARKET - SEAFOOD

The domestic market for seafood has wholesale purchases of \$220 million

Wholesale purchases of seafood by channel  
(dollars, millions, 2004)



### Discussion Points

- Relative strength of supermarket channel

### Notes

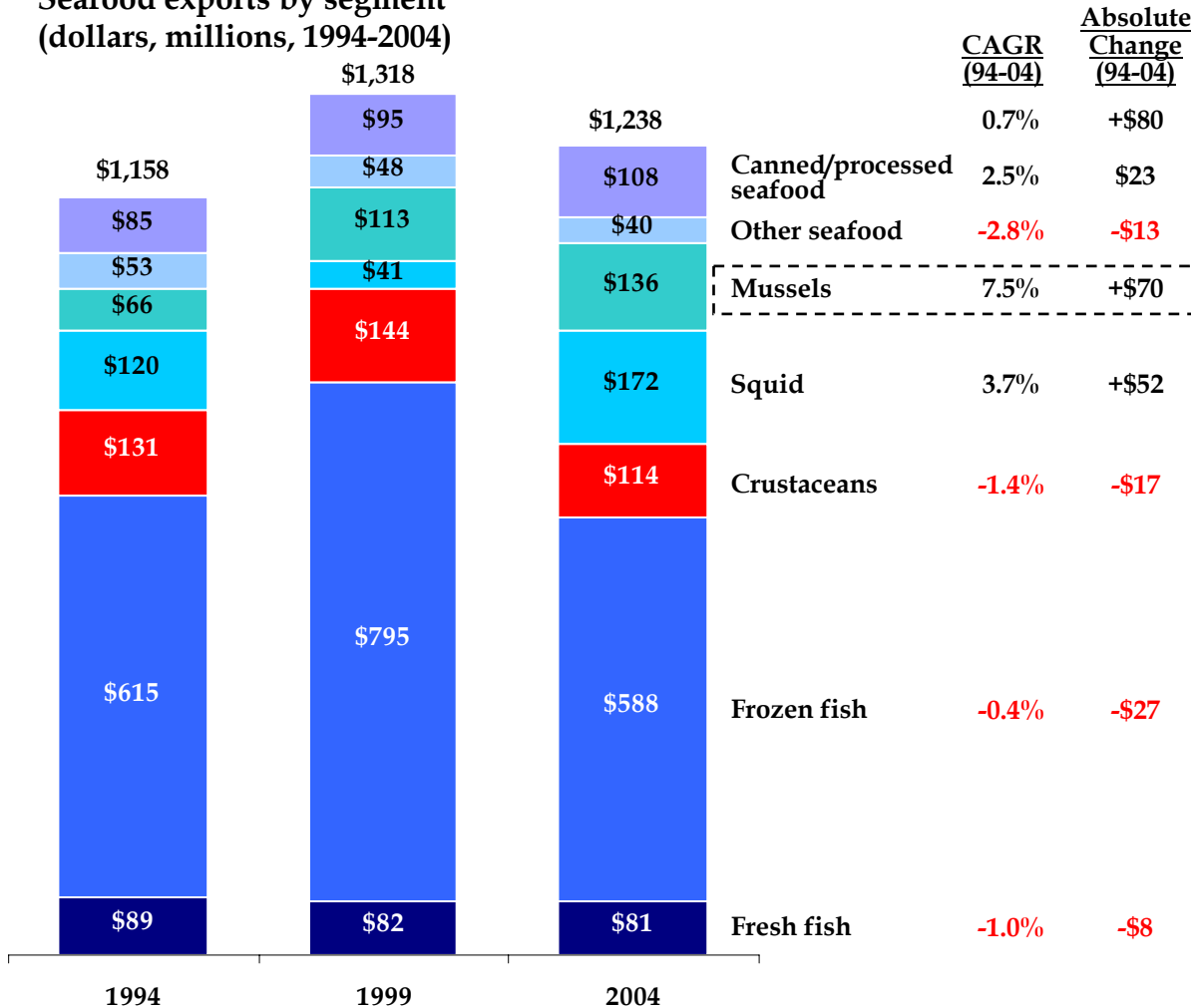
- Represents wholesale purchases of seafood at cost to channel not retail sales to consumers
- Includes domestic and imported canned and frozen products



## EXPORTS MARKETS - SEAFOOD BY TYPE

Mussels from aquaculture are the only real bright spot in seafood exports

Seafood exports by segment  
(dollars, millions, 1994-2004)



### Discussion Points

- Ultimate potential of aquaculture
- Why so little fresh fish?
- Why is frozen fish declining?

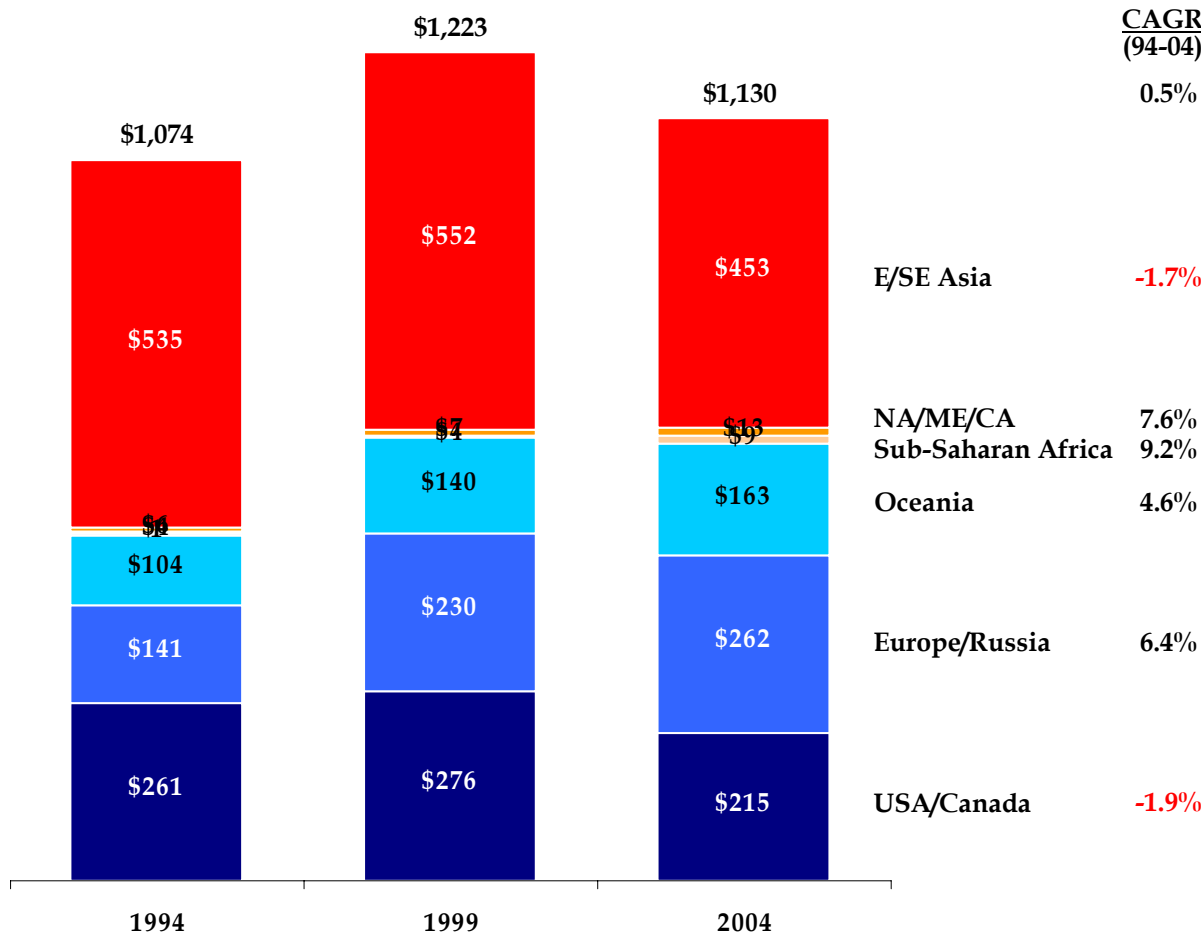
### Notes

- Details of classification:
  - Fresh fish (HS0302)
  - Frozen fish (HS0303-0304)
  - Crustacean (HS0306)
  - Squid (HS030741 & HS030749)
  - Other seafood (remainder of HS03)
  - Canned/processed (HS1603-1605)
- Revised classifications from earlier draft
  - Seafood now includes canned/preserved seafood (HS1603-1605)

# NEW ZEALAND SEAFOOD EXPORT VALUE BY DESTINATION

With declining production and limited moves to value added products, the total export value of the New Zealand seafood is in decline

New Zealand seafood export value by destination (NZ\$, m, 1994-2004)



## Discussion Points

- Why has value fallen in the past 5 years?
- Will the decline continue or has the situation stabilised?
- Why are sales to Europe growing but sales to Asia and the US/Canada falling?

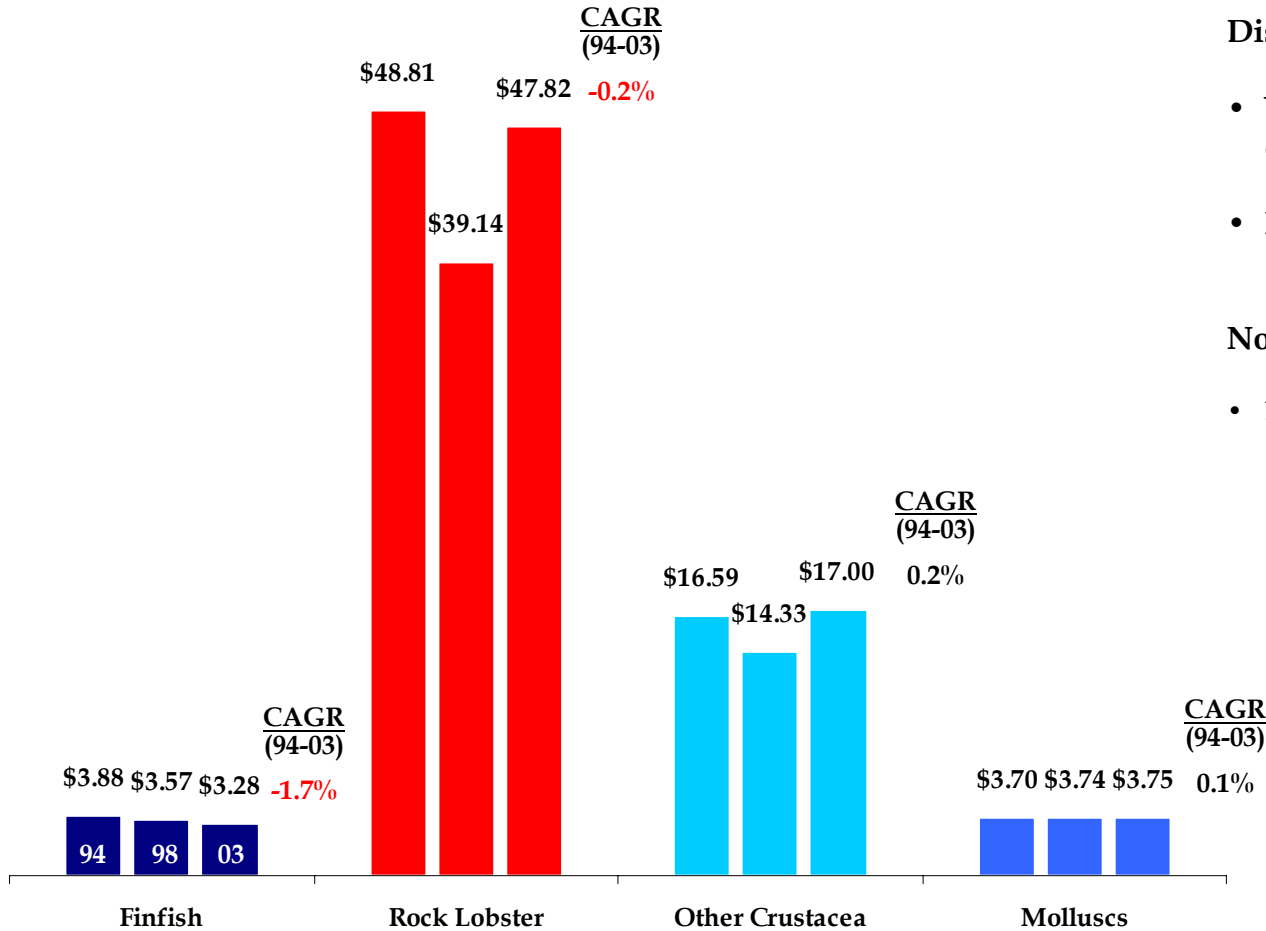
## Notes

- Different classifications from previous page to simplify analysis: does not include canned/preserved seafood (HS1603-1605)

# NEW ZEALAND SEAFOOD EXPORT UNIT VALUE

The export value per kilo of New Zealand's seafood is down or flat

New Zealand seafood export value by destination  
(US\$/kg, 1994-2003)



### Discussion Points

- Why is the value of finfish exports declining?
- Is it possible to farm crustacea?

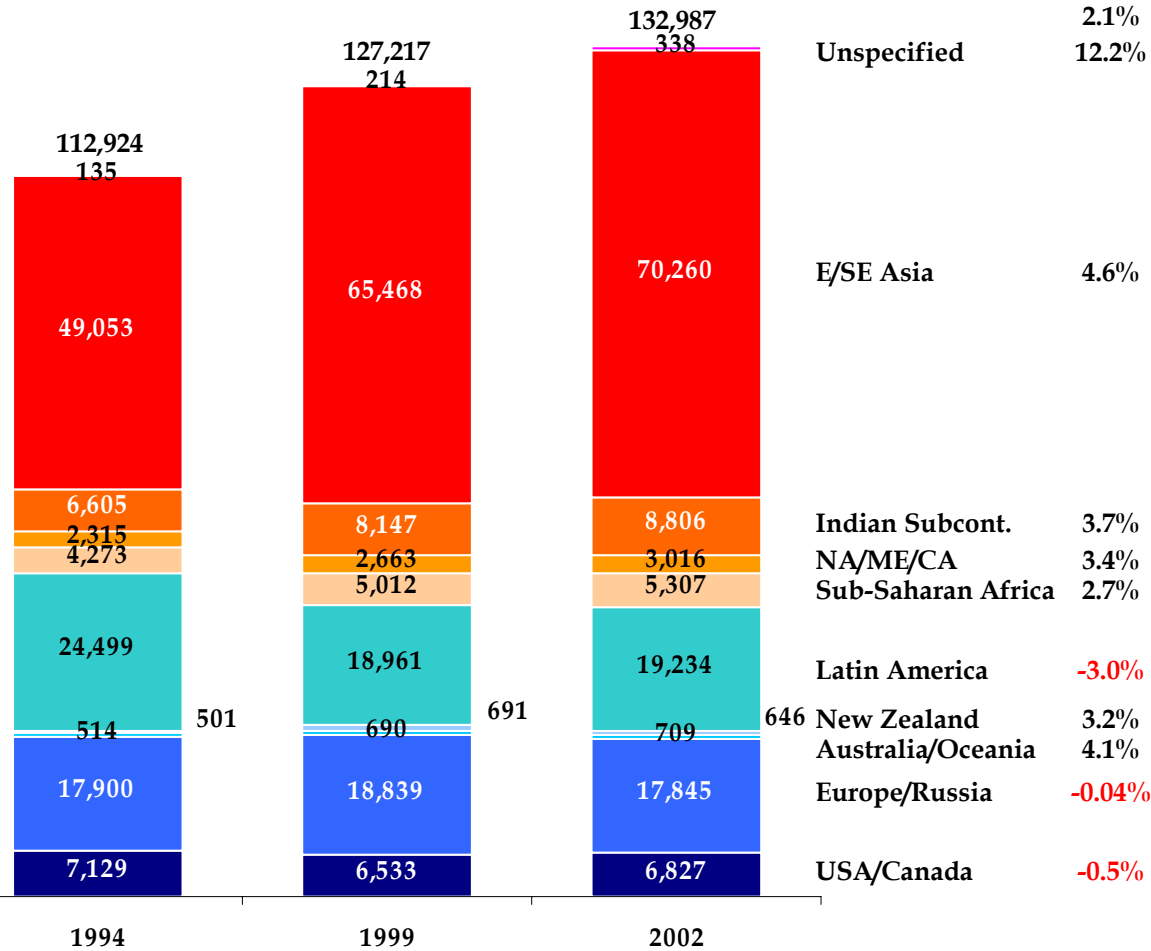
### Notes

- Data on this page in \$US

# SEAFOOD PRODUCTION VOLUME BY REGION

Asia is both the fastest growing and largest seafood producer

Global seafood catch by super-region  
(t, m, 1994-2002)



CAGR  
(94-02)

2.1%  
12.2%

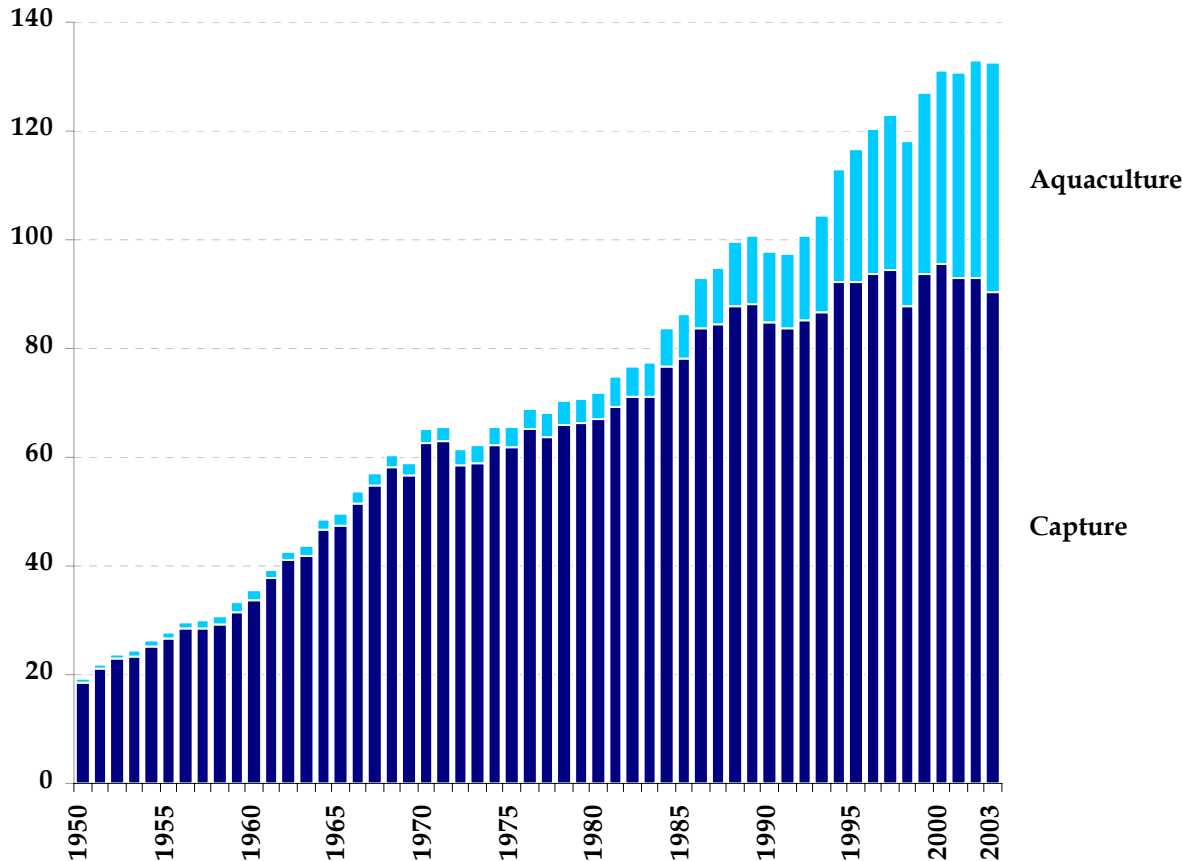
## Discussion Points

- What is E/SE Asia's ultimate potential for seafood production? What are the limiting factors?

# CAPTURE VS. AQUACULTURE

Any future growth in global seafood production (or consumption) will come from aquaculture

Global seafood production by type  
(t, m, 1950-2003)



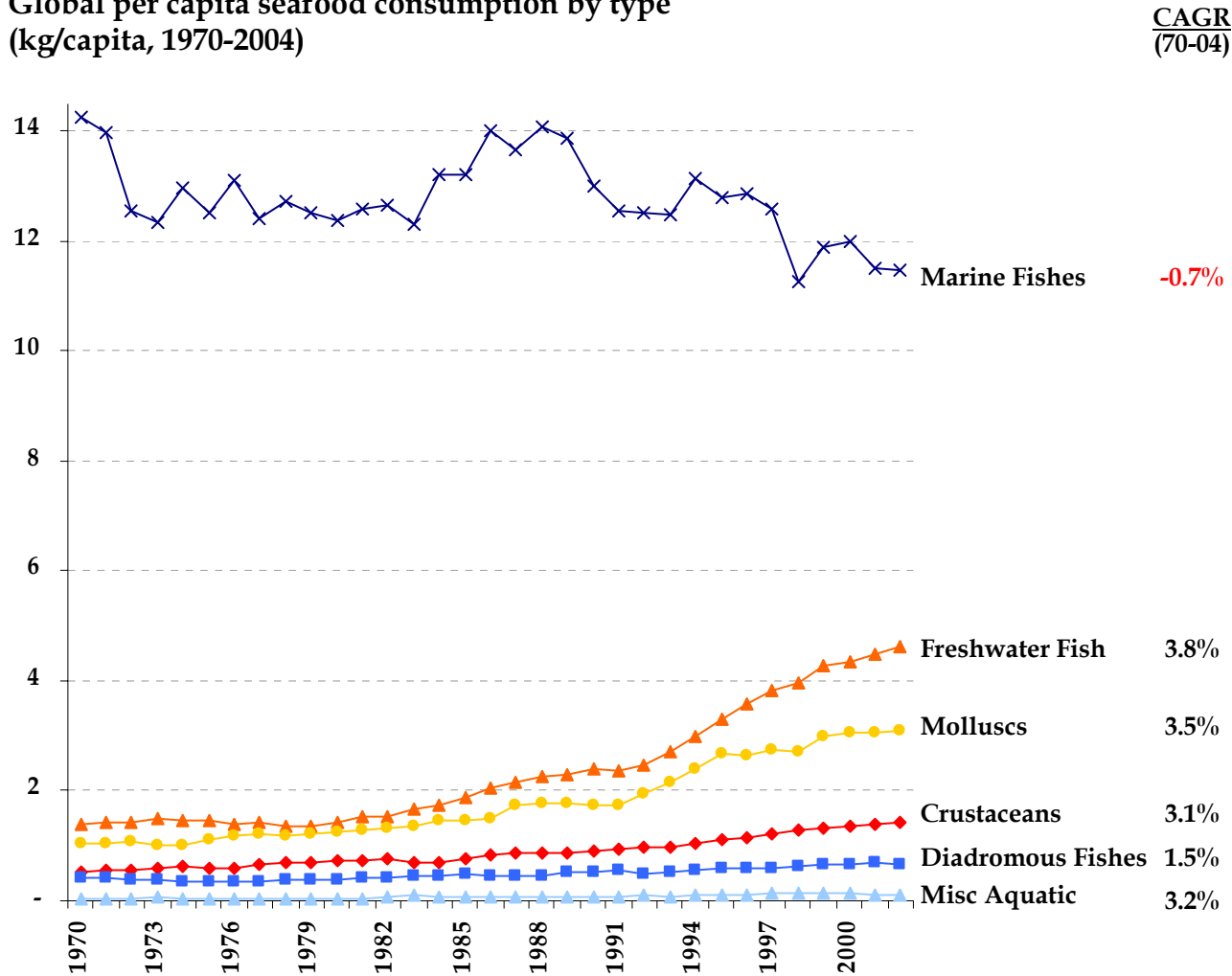
## Discussion Points

- With the end of the moratorium, what is the ultimate potential for aquaculture in New Zealand?

# GLOBAL PER CAPITA SEAFOOD CONSUMPTION

On a global basis, marine fish consumption is declining, while other fish and seafood is growing

Global per capita seafood consumption by type  
(kg/capita, 1970-2004)

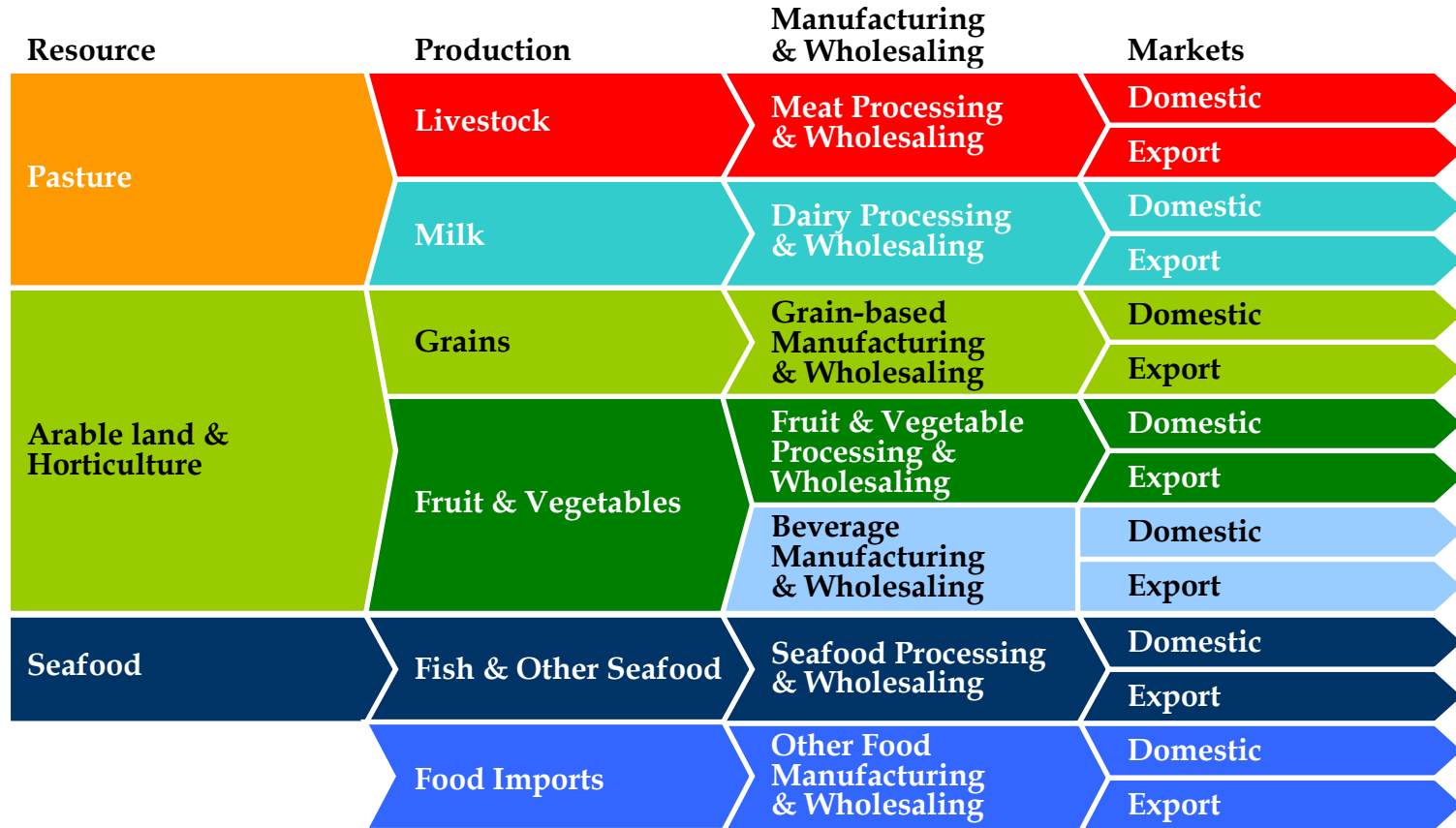


### Discussion Points

- Why is marine fish consumption declining? Will this continue?
- Growth coming from aquaculture

### 4. OTHER FOOD MANUFACTURING & WHOLESALING

The fourth section of this report looks at other food manufacturing and wholesaling



## INDUSTRY STRUCTURE - OTHER FOOD MANUFACTURING & WHOLESALING

The “other food” segment contains a range of business of all sizes making and importing a range of products

- Three distinct segments:
  - New Zealand operations of global (or Australian) category leaders (Nestle, Unilever)
    - Key distinction: those that manufacture (e.g. Cadbury) and those that only import (e.g. Kellogg)
    - Most are implementing on a global plan rather than innovating here
    - Highly focused on a small number of categories; few generate significant exports
    - Trans-Tasman integration increasing pressure to “run it out of Sydney”
  - Few New Zealand owned manufacturers of significant scale (Hansells, Healtheries)
    - Most are number 3 or 4 players in mature categories against global players
    - No significant Trans-Tasman integration or leadership
    - None are publicly listed
  - Emerging small and medium size manufacturers and wholesalers/importers (numerous)
    - Key distinction: those that manufacture and those that only import
    - Manufacturers struggle to achieve scale and struggle to make the leap to Australia
    - Importers are threatened by parallel imports and trans-Tasman integration



## KEY COMPANIES - OTHER FOOD

The large players in the “other food” sector are largely the New Zealand operations of global or Australian category leaders

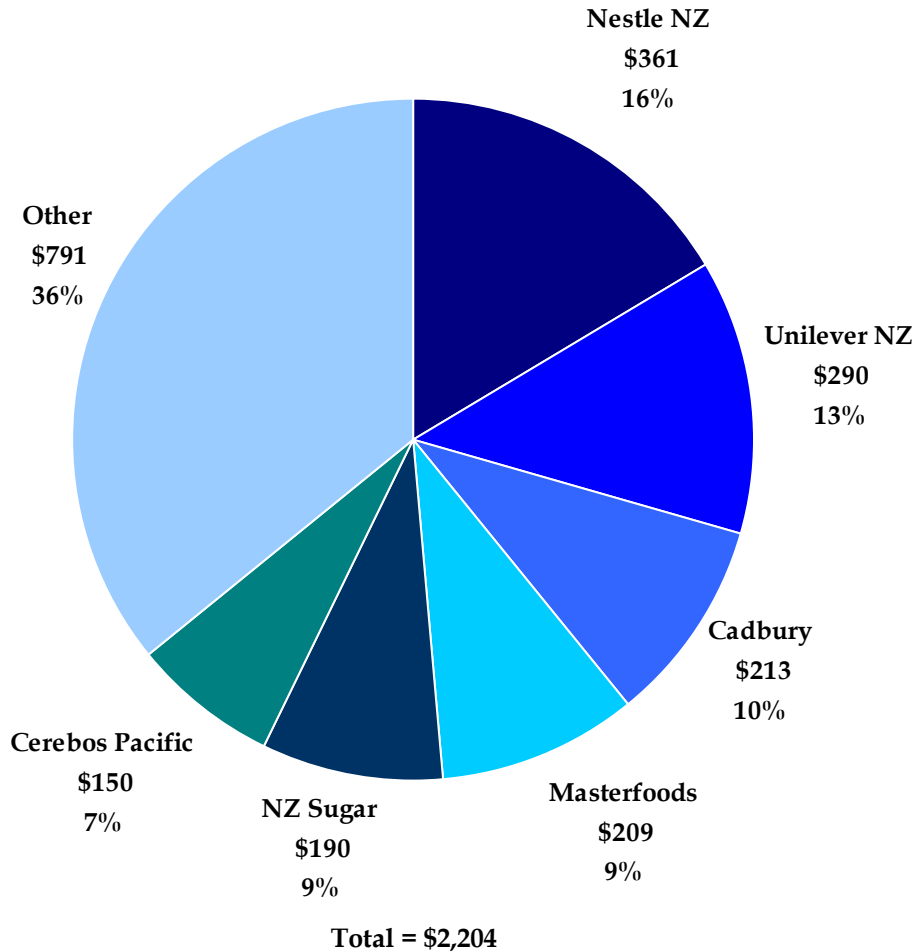
Key companies in the ‘other food’ manufacturing and wholesaling sector

Company	Turnover (NZ\$, m; 2004)	Employees	Ownership	Activities
Nestle New Zealand	\$361	750	Switzerland Public Listed	- Manufacturer and importer of grocery products
Unilever New Zealand	\$290	400	United Kingdom Public Listed	- Manufacturer and importer of grocery products - Also has significant non-foods activities in this total
Cadbury Confectionery	\$213	1,100	United Kingdom Public Listed	- Production of confectionery
Effem Foods / Masterfoods (NZ)	\$209	350	United States Private	- Production of confectionery and grocery products
New Zealand Sugar Limited	\$190	160	Australia Public/Private	- Processing of sugar
Cerebos Pacific	\$150	275	Singapore Public Listed	- Manufacturer and importer of grocery products
Hansells NZ	\$68	286	New Zealand Private	- Manufacturer of grocery products
Healtheries NZ	\$50	250	New Zealand Private	- Manufacturer of grocery products - Growing presence in Australia not included in totals
Wrigley (NZ)	\$37	28	United States Public Listed	- Importer/Wholesaler of gum and confectionery
Kerry Ingredients	\$30	270	Ireland Public Listed	- Manufacturer/Importer/wholesaler of ingredients, flavours and additives
General Mills	\$24	95	United States Public Listed	- Importer/wholesaler of grocery products

## MARKET SHARE - OTHER FOOD

The “other food” category is dominated by global category leaders

New Zealand ‘other food’ sales market share  
(% of sales; 2004)



### Discussion Points

- Why is this dominated by global multinationals? What are the implications of your answer to the overall New Zealand food industry?

### Notes

- No available data on wholesale turnover leading to the potential that the size of “other” is understated due to methodology
- Market share represents New Zealand wholesale domestic sales and export sales (at border); does not include international sales or margins

## ACQUISITIONS - OTHER FOOD

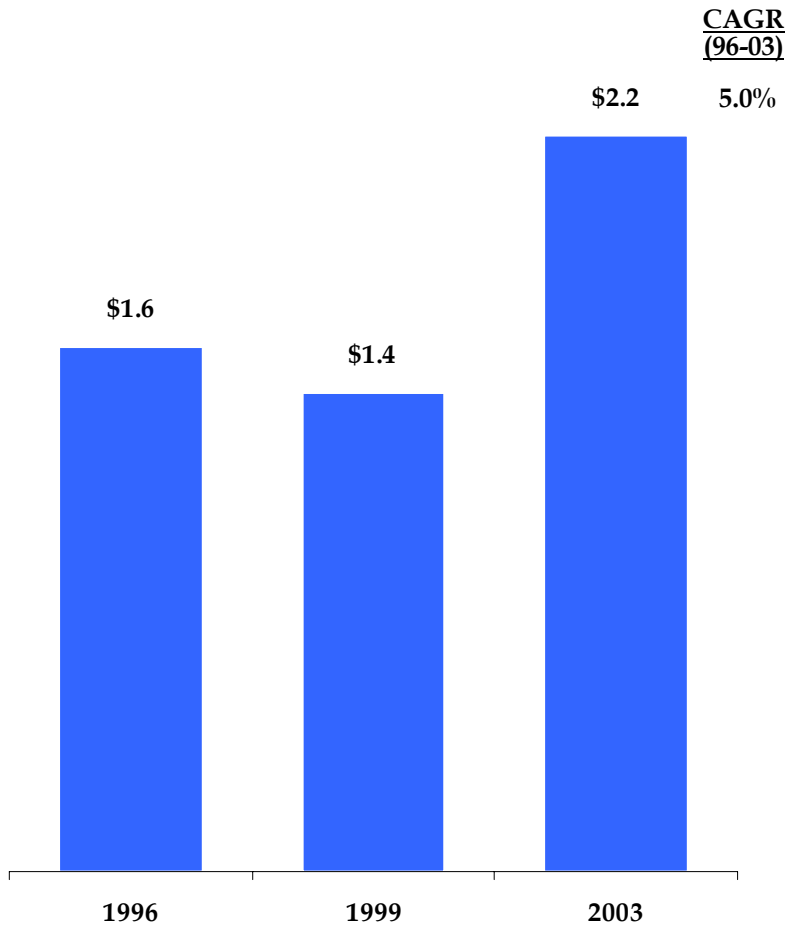
There have been numerous acquisitions, many of these have been by smaller local companies

Acquiror	Acquiree	Date	Notes
Prolife Foods	Australasian Bulk Foods	Oct 2004	Confectionery Imports
Sure as Eggs Marketing	Hen House Northern	Oct 2004	Merged to form - Independent Egg Producers Checkout-op
The Aintree Food Gp	Merger of Real Foods, William Aitken & Co, Strikeforce NZ	Feb 2004	Importers, dried fruit, oil, Vitasoy
Sanitarium	Lisa's Foods	Mar 2003	Dips and Spreads business
Sweetline	Richard Hislop	April 2002	Importer and distributor
Cadbury	Snack bars business of Mother Earth	Feb 2002	Snack bar production

# MANUFACTURING TURNOVER GROWTH - OTHER FOOD

## “Other food” is showing reasonable growth

Other food manufacturing turnover  
(dollars, billions, 1996-2003)



### Discussion Points

- Drivers of growth

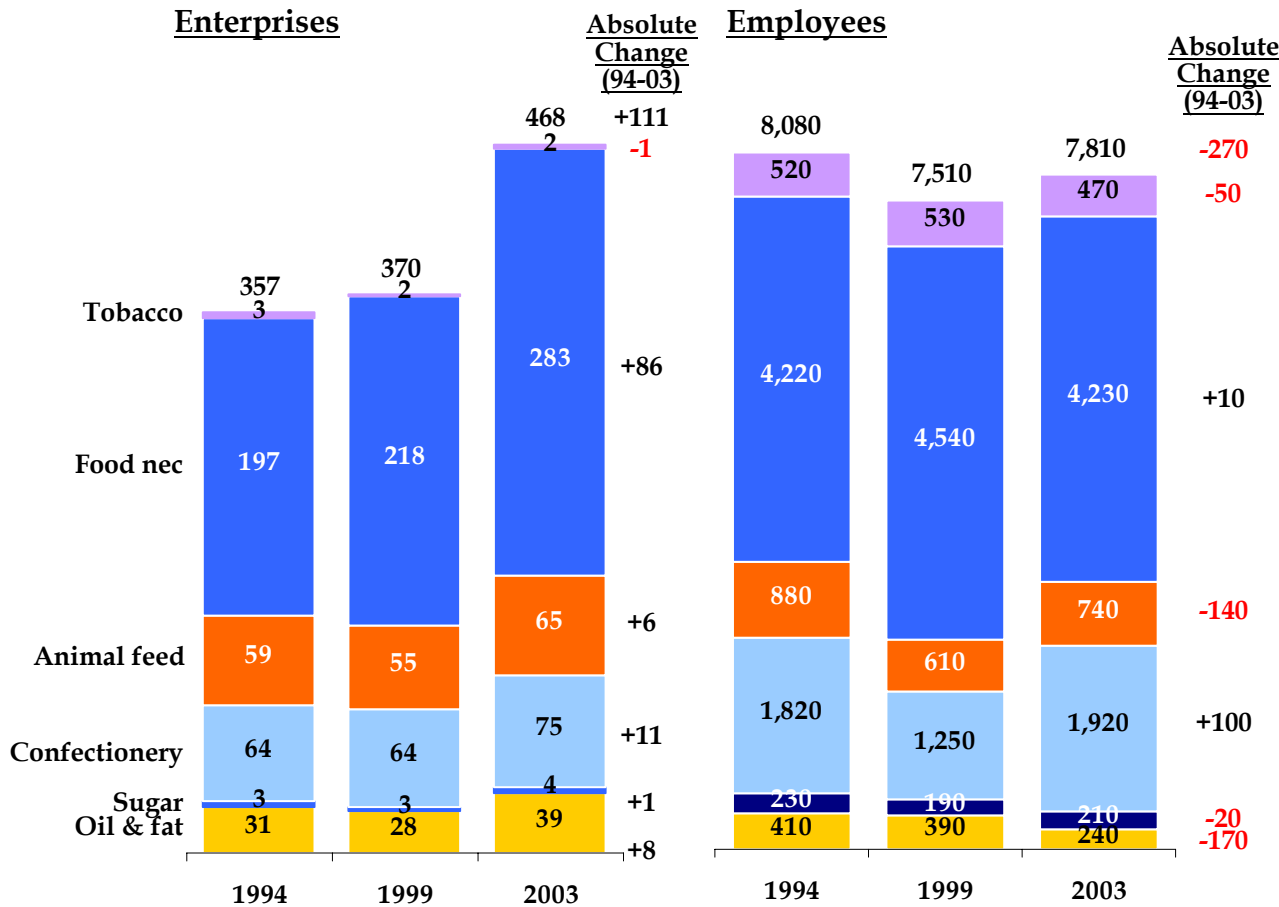
### Notes

- No data available prior to 1996 (AES); 2004 data not yet available

# ENTERPRISES & EMPLOYEES - OTHER FOOD

Food nec is creating more enterprises, but confectionery is the main segment creating more employment

Other food manufacturing statistics  
(enterprises, employees, actual, 1994-2003)



### Discussion Points

- Employment drop in confectionery in 1999

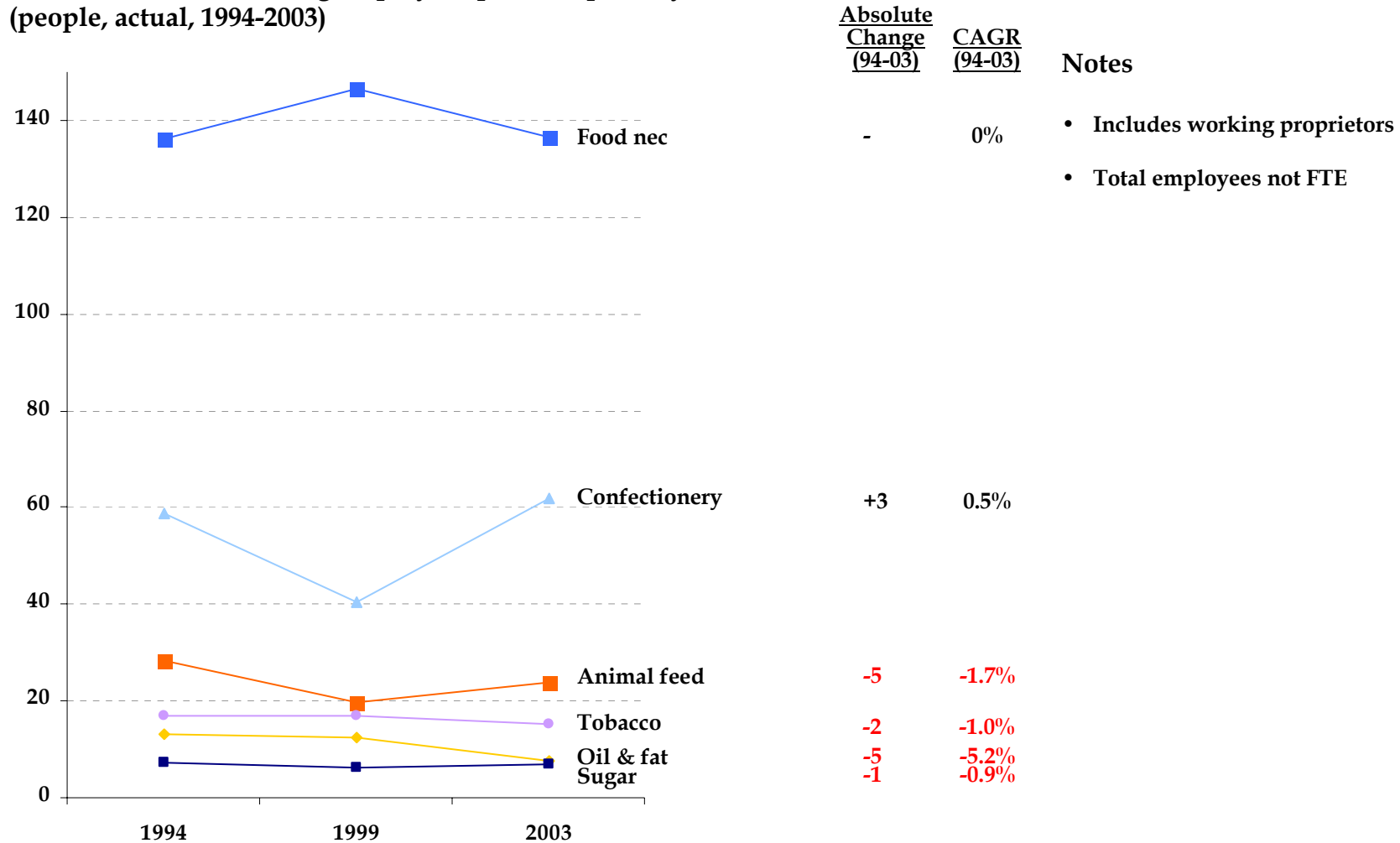
### Notes

- Nec is “not elsewhere classified”
- Tobacco left in to show relative scale as later wholesaling turnover data includes tobacco (inseparable at source)

# MANUFACTURING EMPLOYMENT PER ENTERPRISE - OTHER FOOD

## Only confectionery is increasing employment per enterprise

Other food manufacturing employees per enterprise by sector (people, actual, 1994-2003)

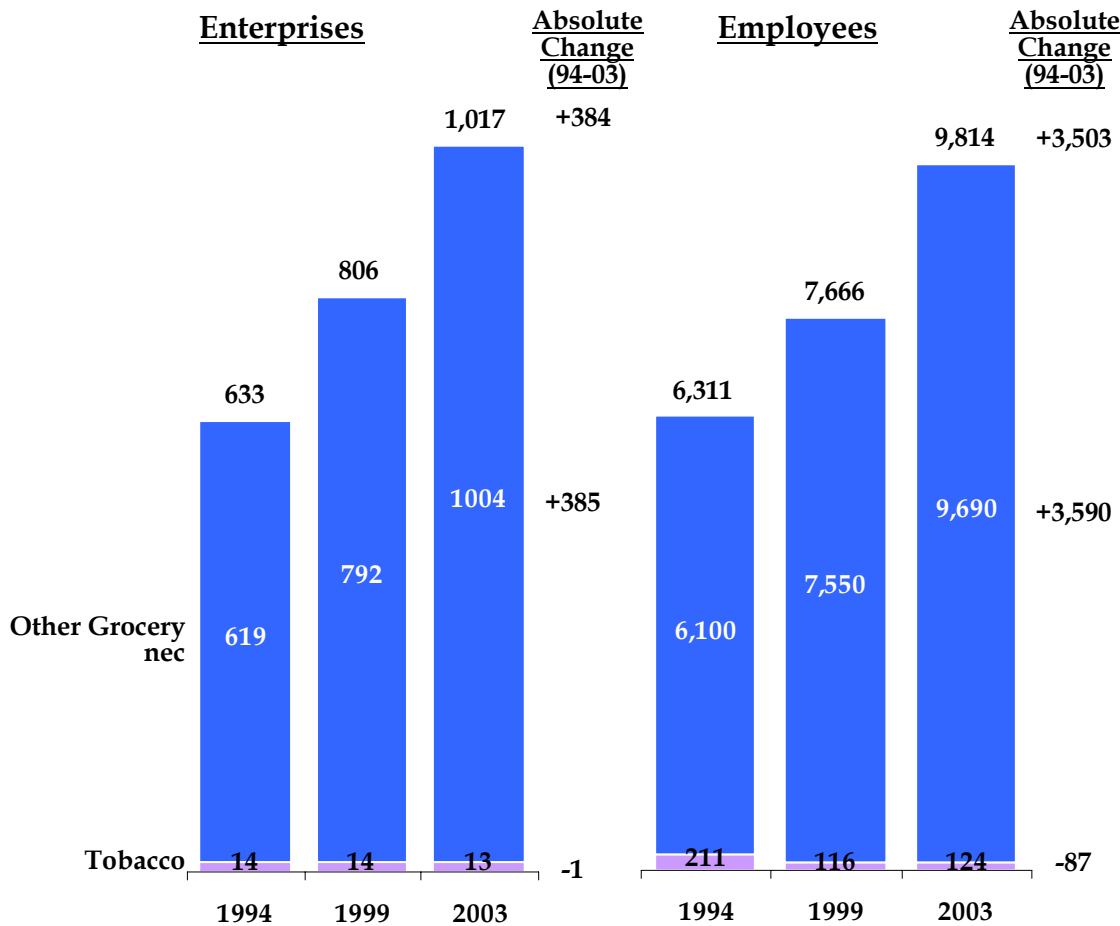


- Notes
- Includes working proprietors
  - Total employees not FTE

# WHOLESALING - OTHER GROCERY

General grocery wholesalers are showing strong enterprise and employment growth

Grocery wholesaling statistics  
(enterprises, employees, actual, 1994-2003)



### Discussion Points

- Why is this happening?

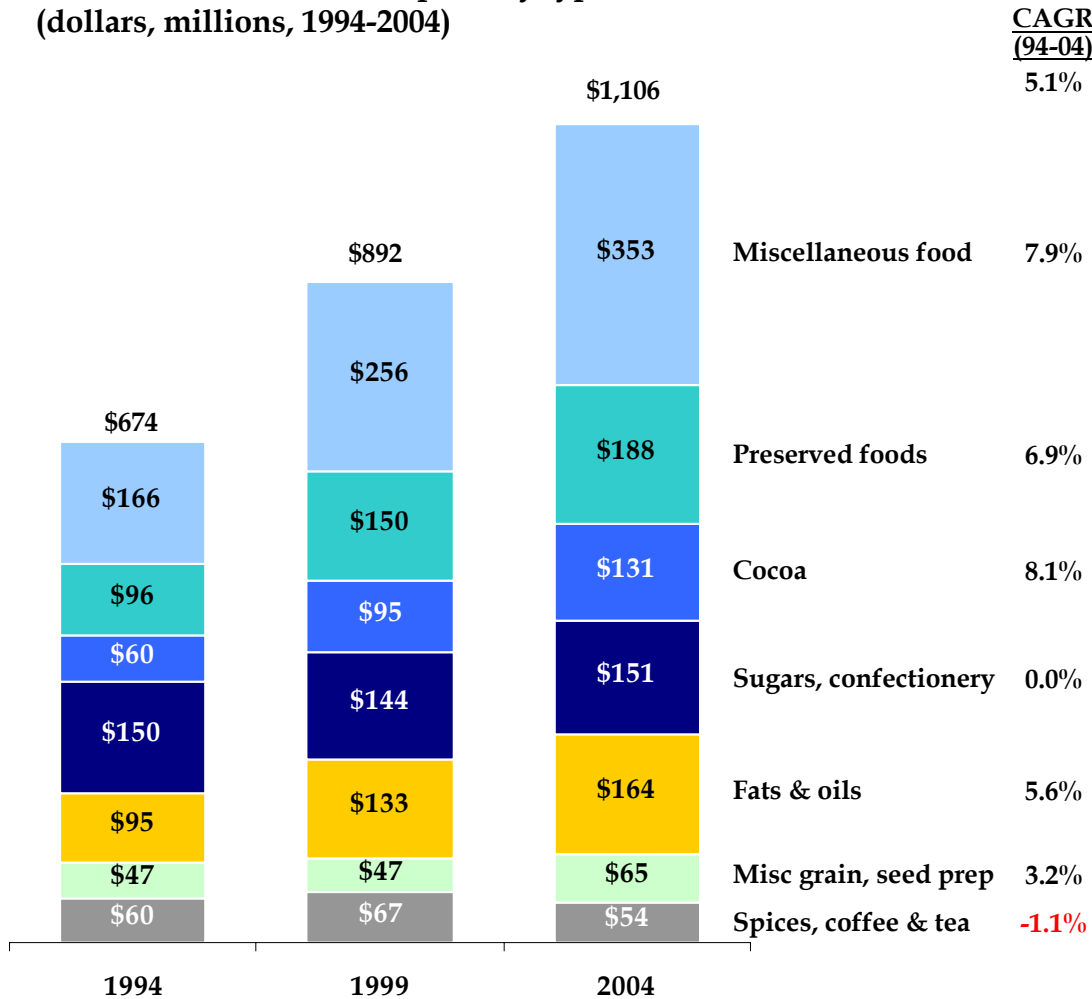
### Notes

- Will likely include some part of Foodstuffs wholesale activities
- May reflect a shift to more part-time employees

# IMPORTS - OTHER FOOD

New Zealand's imports of all other foods captures a range of food ingredients and products

Details of "other food" imports by type  
(dollars, millions, 1994-2004)



### Discussion Points

- Growth of cocoa imports to be used in dairy exports

### Notes

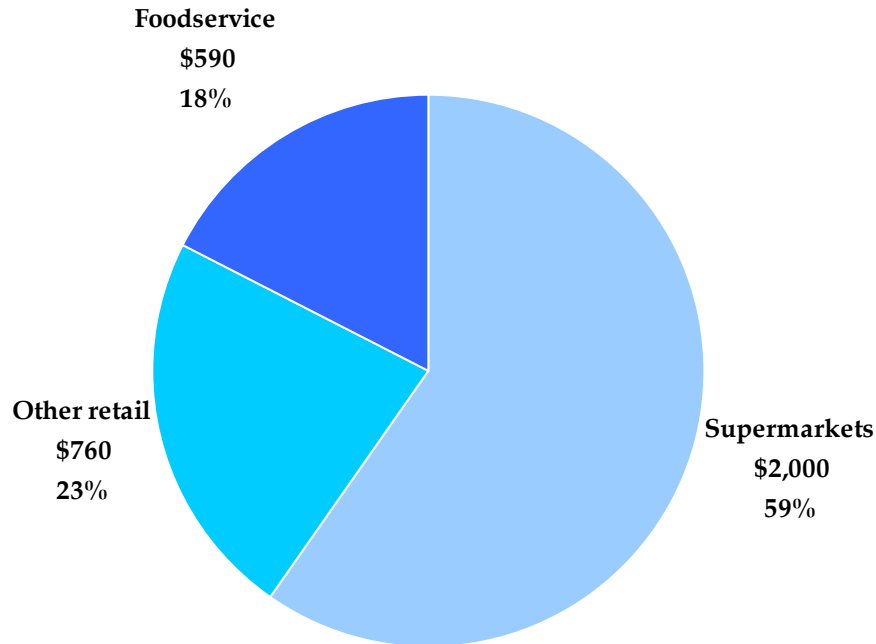
- Uses HS2 codes



## DOMESTIC MARKET - OTHER FOODS

The domestic market for other foods has wholesale turnover of \$3.35 billion

Wholesale purchases of other food by channel  
(dollars, millions, 2004)



Total = \$3,350 million

### Discussion Points

- Relative strength of supermarket channel

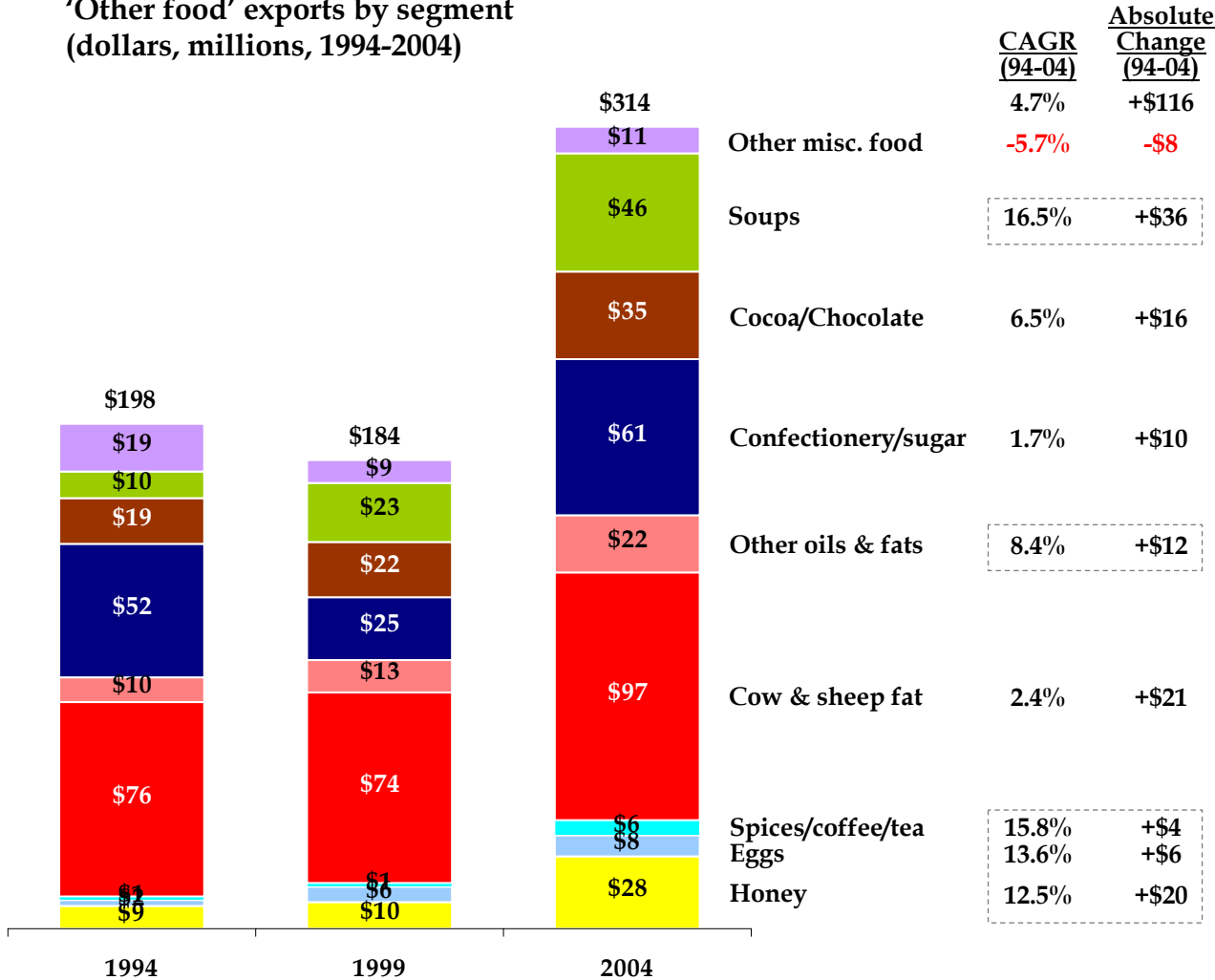
### Notes

- Represents wholesale purchases of grain-based foods at cost to segment not retail sales to consumers

# EXPORTS - OTHER FOOD

There are a number of stars in 'other food'

'Other food' exports by segment (dollars, millions, 1994-2004)



## Discussion Points

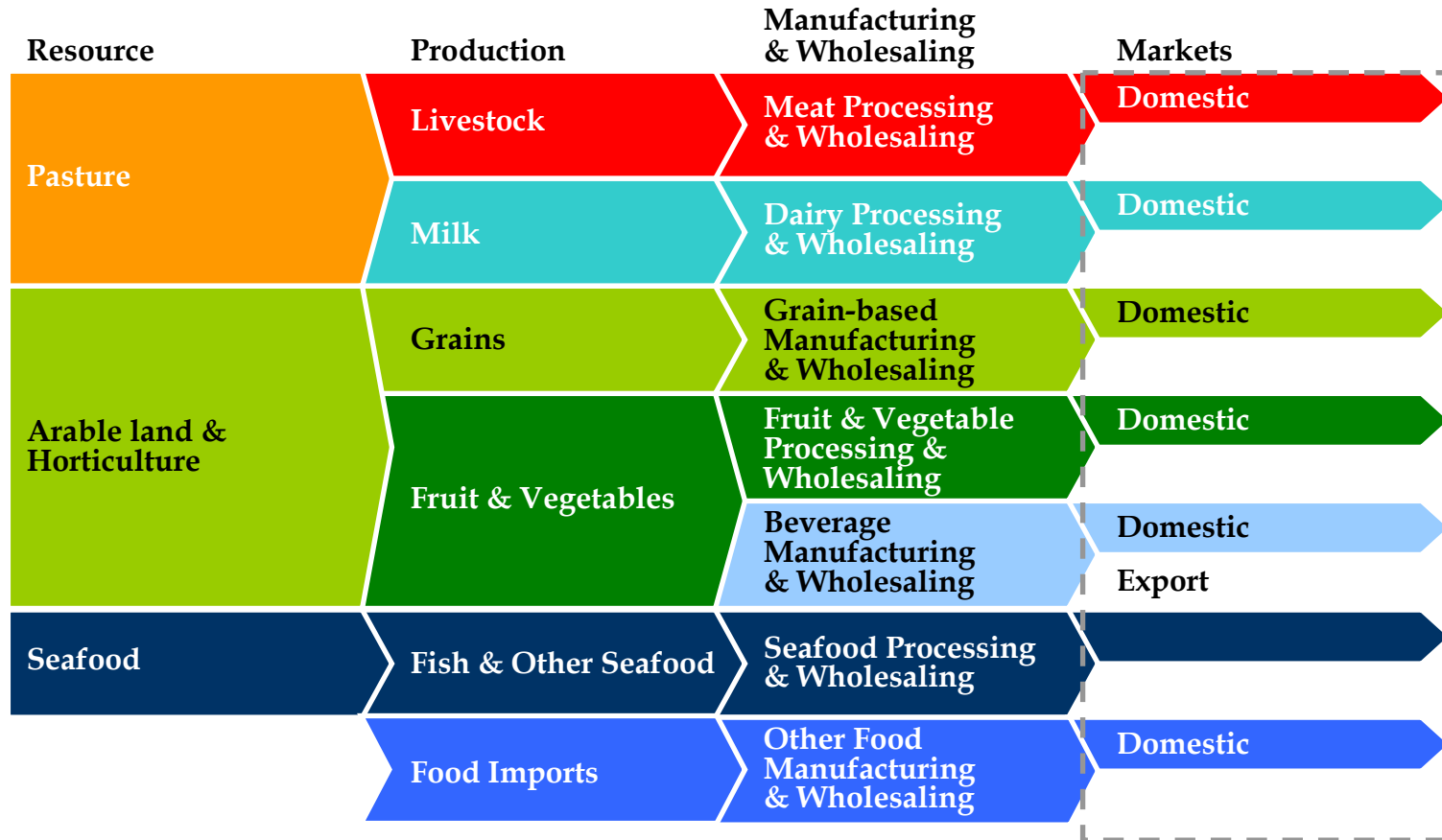
- What need to happen to encourage more growth of other food?

## Notes

- Details of classification:
  - Eggs (HS0407-0408)
  - Honey (HS0409)
  - Cow & sheep fat (HS1502)
  - Oils & fats (remainder HS15 less dairy fats)
  - Confectionery/sugar (HS17 less lactose)
  - Cocoa (HS18 less dairy cocoa), coffee/tea/spices (HS09)
  - Soups (HS2104)
  - Other misc food (rest of HS21 less dairy)

## 5. NEW ZEALAND DOMESTIC MARKET - FOOD RETAILING & FOODSERVICE

The importance of the domestic market to the food industry should not be underestimated



## INDUSTRY STRUCTURE - FOOD RETAILING

**While the supermarket segment is now highly consolidated into two groups, there is a vibrant and growing specialist sector outside this duopoly**

- Supermarket sector now highly consolidated into two groups
  - Foodstuffs NZ, a cooperative of independent store owners
    - made up of three legally separate regional cooperatives (Auckland, Wellington, South Island)
    - operate supermarkets (New World, Pak'N Save), grocers/dairies (Four Square) and cash & carry
  - Progressive Enterprises, a chain of corporate owned supermarkets
    - operate supermarkets (Woolworths, Foodtown, Countdown)
    - in the process of being sold by FAL Australia to Woolworths Australia (not related to Woolworths in NZ)
  - However, a growing presence of independent Asian supermarkets serving the growing Asian population (and others)
- Specialist segment (butchers, bakers and greengrocers) is consolidating and growing as it transitions from being primarily independents to primarily chains (e.g. Bakers Delight)
- Likely entrance of new players into the market
  - The Warehouse has announced plans to open hypermarkets which would combine their existing general merchandise with a food offer
  - Aldi, a German owned supermarket group with operations in Australia, appears to be preparing to enter the market at some point in the near future

## KEY COMPANIES – FOOD RETAILING

**Progressive Enterprises and the three Foodstuffs Cooperatives are currently the only players in food retailing of significant size**

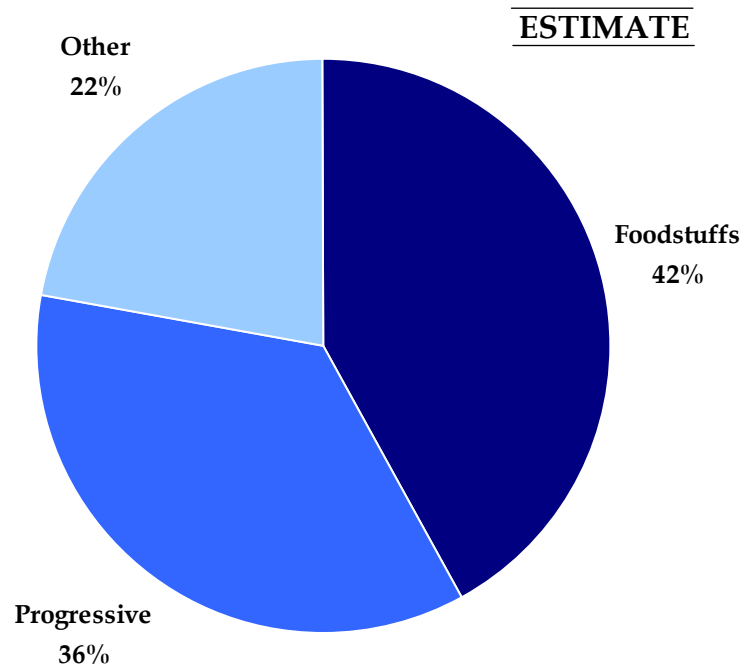
Key companies in the food & beverage retailing sector

Company	Turnover (NZ\$; m; 2004)	Employees	Ownership	Activities
Progressive Enterprises	\$4,949	20,000	Australia Listed	<ul style="list-style-type: none"> <li>- Supermarkets (Foodtown, Countdown, Woolworths)</li> <li>- In the process of being sold by Foodland Australia to Woolworths Australia (not related to Woolworths NZ)</li> </ul>
Foodstuffs Auckland	\$2,955 <sup>1</sup>	1,500 <sup>2</sup>	New Zealand Cooperative	<ul style="list-style-type: none"> <li>- Supermarkets (New World, Pak’N Save)</li> <li>- Grocers &amp; dairies (Four Square)</li> <li>- Cash &amp; Carry (Gilmours)</li> </ul>
Foodstuffs (South Island)	\$1,909 <sup>1</sup>	1,038 <sup>2</sup>	New Zealand Cooperative	<ul style="list-style-type: none"> <li>- Supermarkets (New World, Pak’N Save)</li> <li>- Grocers &amp; dairies (Four Square, On The Spot)</li> <li>- Cash &amp; Carry (Trents)</li> </ul>
Foodstuffs (Wellington)	\$1,714 <sup>1</sup>	1,127 <sup>2</sup>	New Zealand Cooperative	<ul style="list-style-type: none"> <li>- Supermarkets (New World, Pak’N Save, Write Price)</li> <li>- Grocers &amp; dairies (Four Square)</li> <li>- Cash &amp; Carry (Toops)</li> </ul>

## MARKET SHARE - FOOD RETAIL

Together Foodstuffs and Progressive represent about 78% of retail food sales

New Zealand food retail sales market share  
(% of sales; 2004)



### Discussion Points

- Implications for food and beverage manufacturers
- Implications for new product development and innovation in the domestic market

### Notes

- Foodstuffs represents retail sales of numerous independent supermarkets not wholesale turnover
- Foodstuffs includes retail sales of cooperative supplied supermarkets, grocers, and dairies; excludes cash & carry sales (food wholesale)

## ACQUISITIONS - FOOD RETAILING

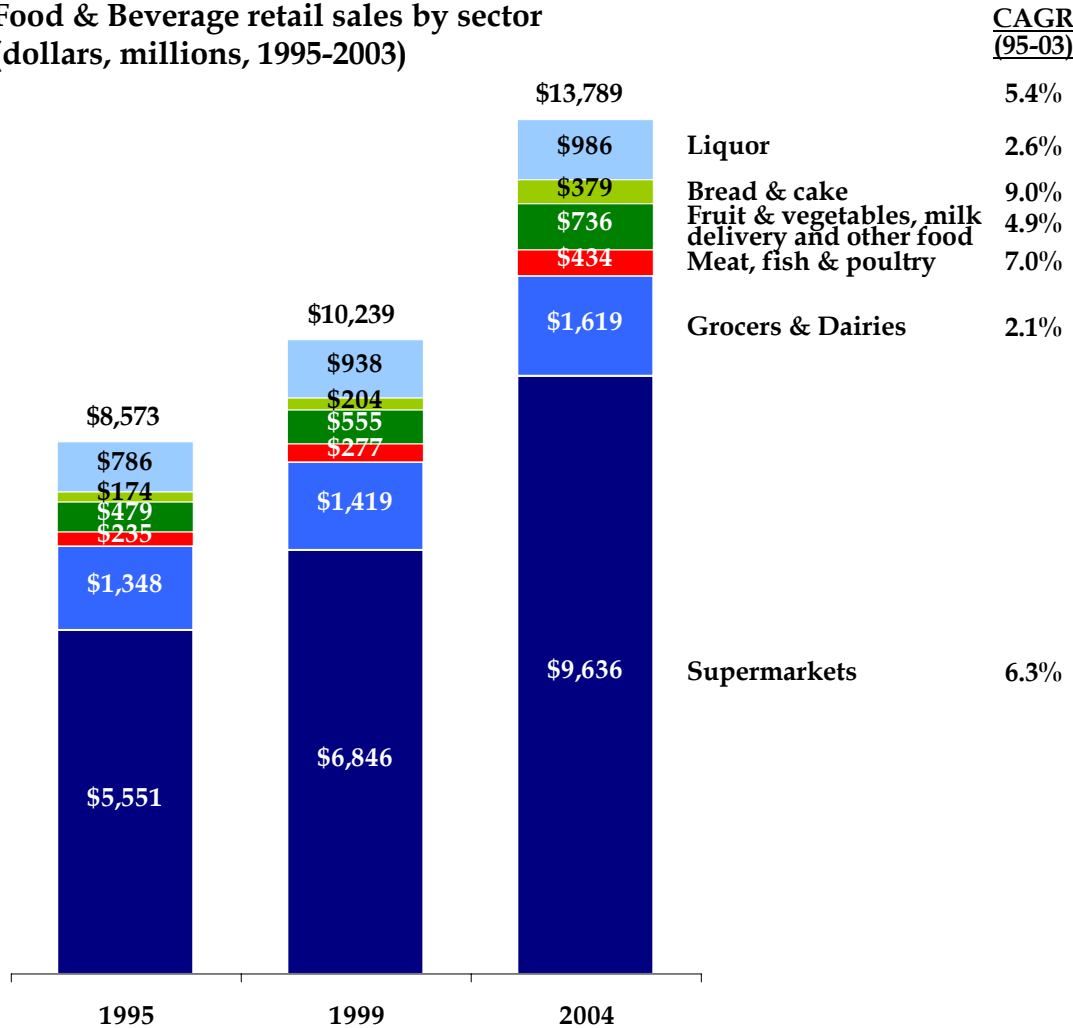
**Progressive Enterprises has been the focus of the two major recent acquisitions in food retailing**

Acquiror	Acquiree	Date	Notes
Woolworths Australia	Progressive Enterprises	In progress (Oct 2005?)	Largest supermarket retailer in Australia in the process of acquiring Progressive Enterprises from Foodland Associated of Australia
Progressive Enterprises	Woolworths New Zealand	2002	Progressive Enterprises (owned by Foodland Associated of Australia) purchased Woolworths New Zealand from Dairy Farm International of Hong Kong

# RETAIL SALES GROWTH

While the retail food industry overall is growing at 5.4%, this masks significant variation among segments

Food & Beverage retail sales by sector  
(dollars, millions, 1995-2003)



## Discussion Points

- Reasons for growth of specialists
- Supermarkets adding non-foods to diversify away from low growth food

## Notes

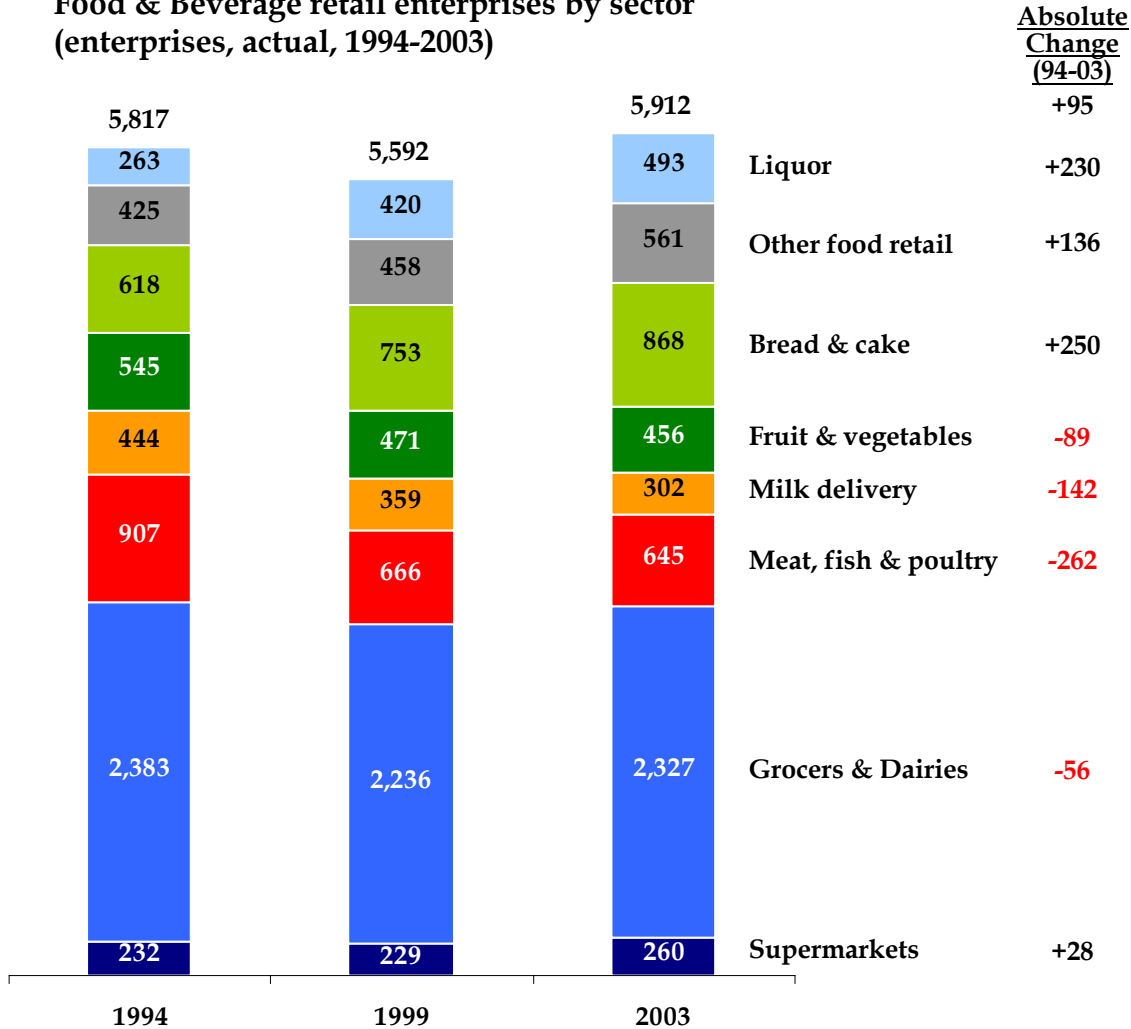
- Fruit & vegetable, milk vending and other food retail combined at source to preserve data quality (margin of error); decline of milk delivery probably hiding growth of fruit & vegetable retailing
- Uses 1995 data due to methodology change in Q2/95; Q1/1995 extrapolated from other data
- Actual dollars; not inflation adjusted
- Excludes petrol stations and their food sales (impacting dairies)



# NUMBER OF FOOD RETAIL ENTERPRISES

In terms of enterprise numbers, most retail food outlets are not supermarkets

Food & Beverage retail enterprises by sector (enterprises, actual, 1994-2003)



Absolute Change (94-03)  
+95

### Discussion Points

- Chains vs. Independents

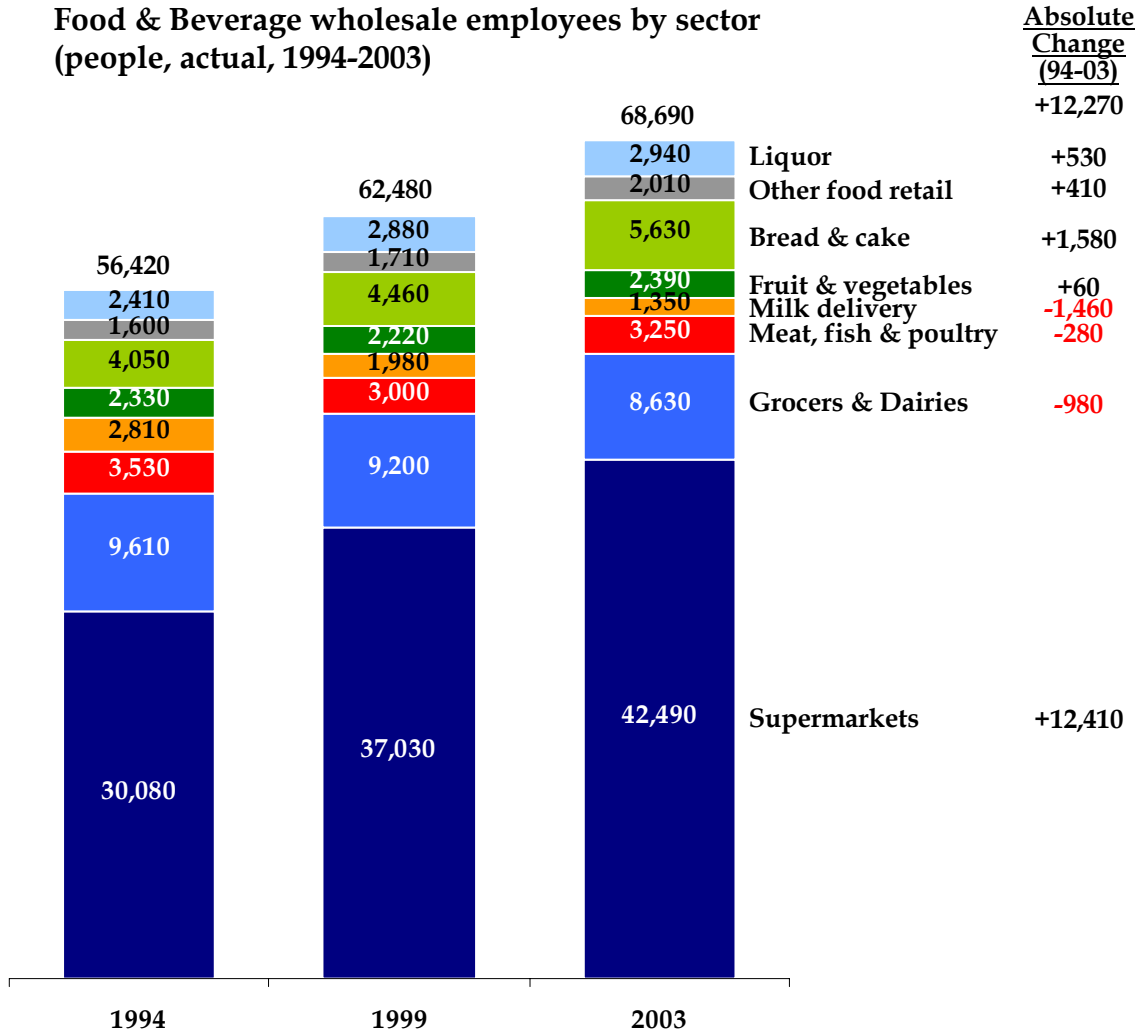
### Notes

- Recent growth of supermarket numbers almost totally Asian supermarkets
- Defined as businesses registered for GST purposes (+\$30,000pa)

# NUMBER OF FOOD RETAIL EMPLOYEES

Supermarkets have added an impressive 12,410 jobs in the past decade

Food & Beverage wholesale employees by sector  
(people, actual, 1994-2003)



### Discussion Points

- Apparent growth may be a function of more part-time, less full-time employees?

### Notes

- Includes working proprietors
- Total employees not FTE

## **INDUSTRY STRUCTURE - FOODSERVICE**

**The foodservice sector is highly fragmented, with little chain or corporate presence, except in the takeaway/fast food sector**

- **Industry can be segmented into three sectors:**
  - **Takeaway made up of local franchisees of global fast food chains (McDonalds, Burger King, Wendy's, Pizza Hut, Subway, Domino's) and numerous independents**
  - **Cafes and restaurants which serve food and beverages and are almost exclusively independently owned and operated; increasing sales of alcohol due to liquor deregulation**
  - **Pubs, taverns, bars and clubs which serve primarily alcohol**
  
- **Strong industry growth (espc. cafes & restaurants) driven by increased tourist arrivals and growing domestic expenditure on food away from home**
  
- **Grocery wholesale into the segment is consolidated into Crean's and the Foodstuffs Cash & Carry operations (Gilmours, Toops & Trents), however perishables wholesaling is fragmented**

## KEY COMPANIES

There are only a few large companies in foodservice

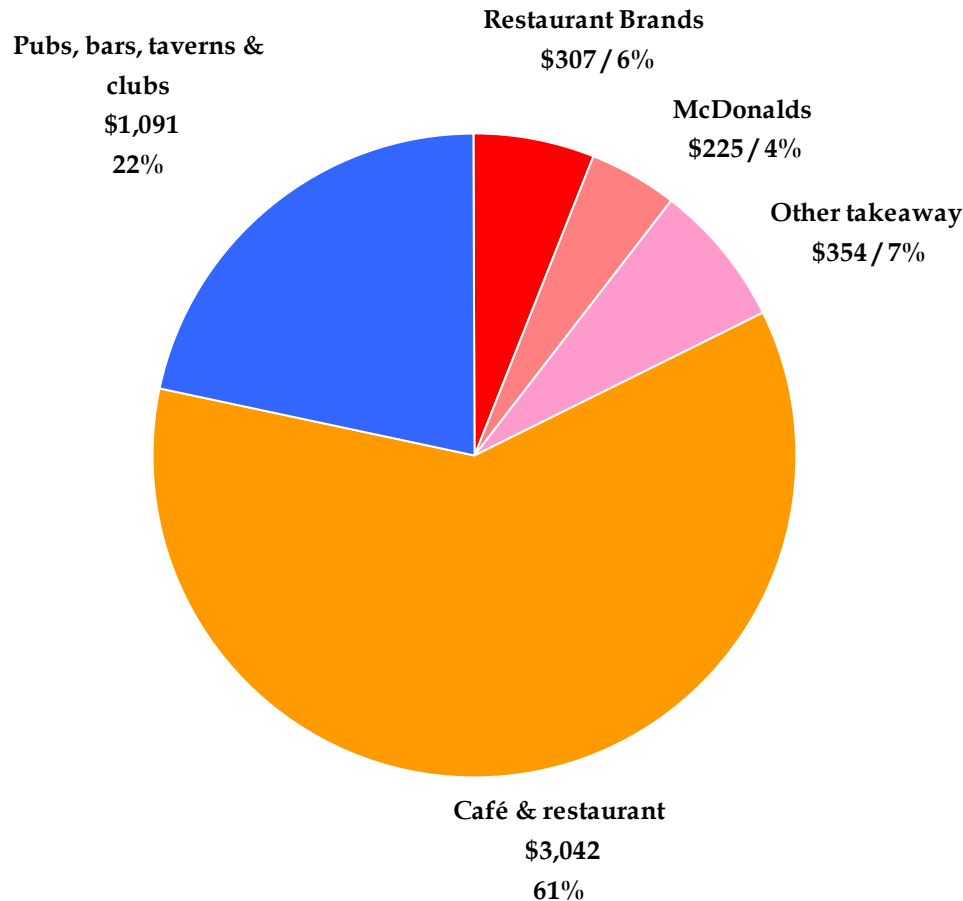
Key companies in the food & beverage retailing sector

Company	Corporate Turnover (NZ\$m; m; 2004)	Sales to Customers (NZ\$m; 2004)	Employees	Ownership	Activities
<b>Retail</b>					
Restaurant Brands NZ	\$307	\$307	7,000	New Zealand Public Listed	<ul style="list-style-type: none"> <li>– Operate fast food restaurants</li> <li>– New Zealand master franchisee for KFC, Pizza Hut and Starbucks</li> </ul>
McDonalds New Zealand	\$150	\$225	6,000	United States Public Listed	<ul style="list-style-type: none"> <li>– Franchise fast food restaurants to independent owner operators</li> </ul>
<b>Wholesale</b>					
Crean Foodservice	\$168	-	400	South African Public Listed	<ul style="list-style-type: none"> <li>– Wholesale distribution to foodservice</li> <li>– Owned by Bidvest South Africa</li> </ul>

# MARKET SHARE - FOODSERVICE

## Cafes and restaurants are the largest foodservice segment

New Zealand foodservice sales market share  
(% of sales; 2004)



### Discussion Points

- Implications for food and beverage manufacturers

### Notes

- Excludes non-retail foodservice (e.g. schools, prisons, airplanes, cruise lines, retirement homes, hospitals, etc)

## ACQUISITIONS - FOODSERVICE

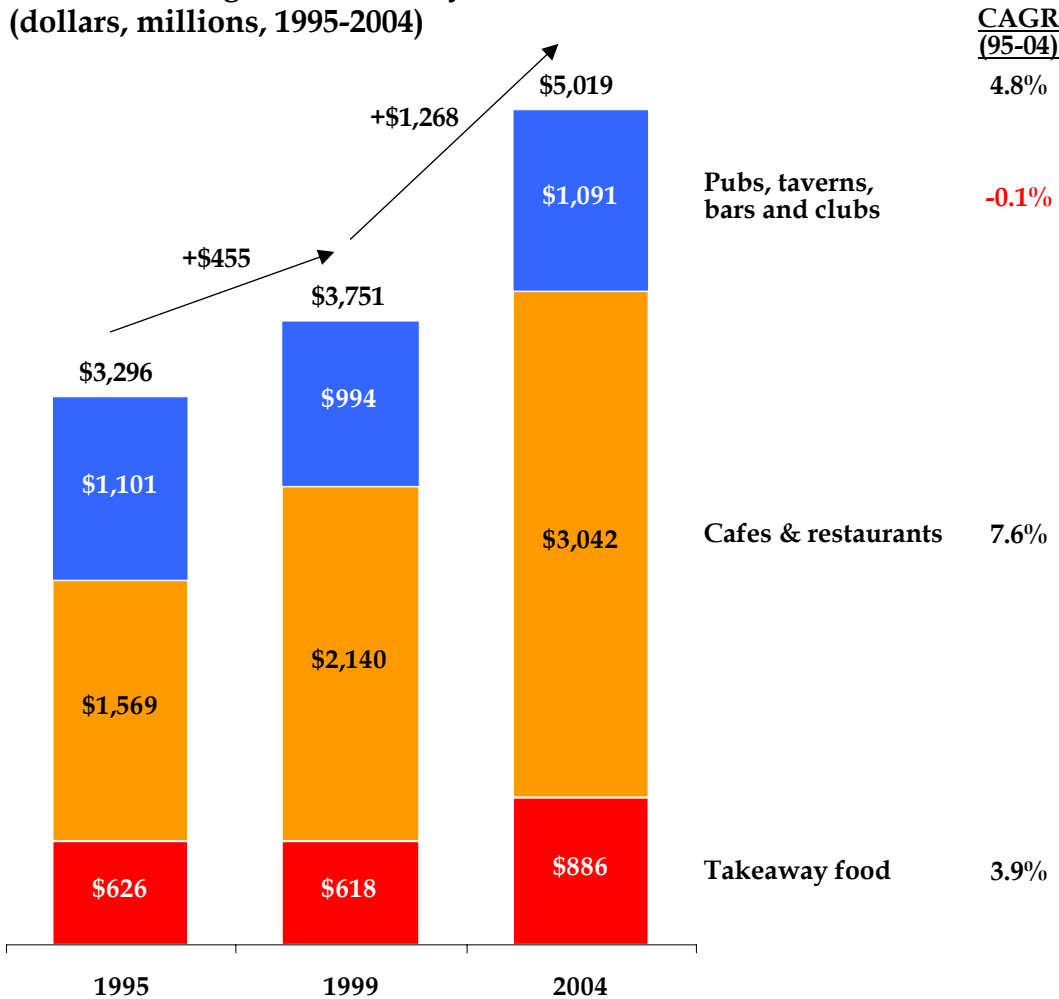
Other than the arrival of Domino's, the major deals in the foodservice sector have been on the wholesale/distribution side

Acquiror	Acquiree	Date	Notes
Domino's Pizza Australia	Mad Dog Pizza	May 2005	Australian franchisee of Domino's six store chain in Christchurch
Domino's Pizza Australia	Pizza Haven	Jan 2005	Australian franchisee of Domino's acquires 35 store chain
Creans Foodservice	Chef Direct	Oct 2004	Foodservice distributor in Taupo (primarily fresh supply)
Creans Foodservice	Oceanic Foods	Oct 2003	Frozen and chilled foodservice distributors,
Creans Foodservice	R&S Distributors	Dec 2003	Foodservice distributors in Hawke's Bay
Delmaine Fine Foods	EuroPacific Foods	June 2003	Foodservice and gourmet foods distributor
Sharon Hunter Tenby Powell	Continental Distributors	Nov 1999	Foodservice and gourmet foods importer/distributor

# FOODSERVICE SALES GROWTH

The foodservice industry has shown strong turnover growth in the past decade, especially in the cafes & restaurants segment

Food & Beverage retail sales by sector (dollars, millions, 1995-2004)



## Discussion Points

- Food requirements of restaurants vs. supermarkets

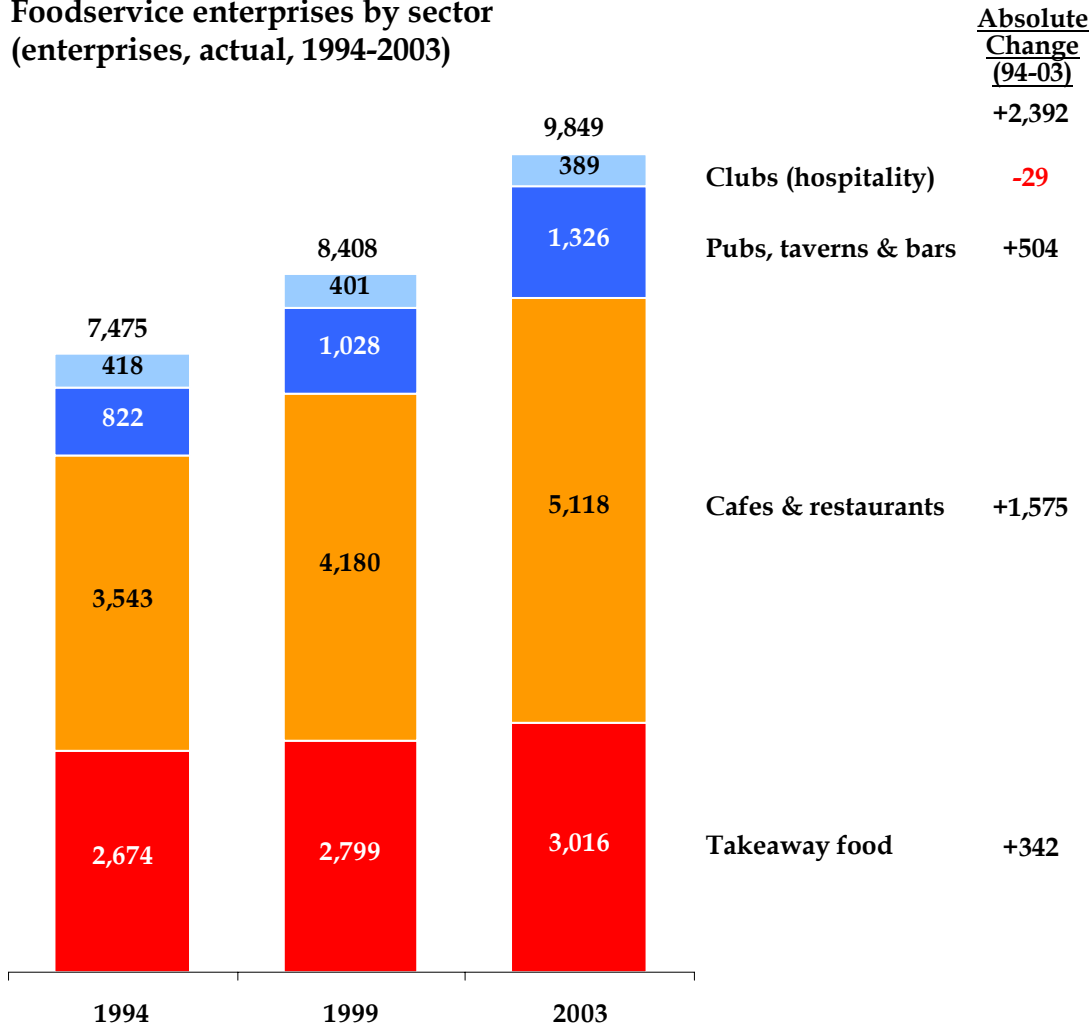
## Notes

- Defined as businesses registered for GST purposes (+\$30,000pa)
- Pubs, taverns & bars and clubs (hospitality) combined at source to preserve data quality (margin of error)
- Uses 1995 data due to methodology change in Q2/95; Q1/1995 extrapolated from other data
- Actual dollars; not inflation adjusted

# NUMBER OF FOODSERVICE ENTERPRISES

The number of foodservice enterprises is growing almost across the board

Foodservice enterprises by sector  
(enterprises, actual, 1994-2003)



### Discussion Points

- Cost-to-serve a fragmented customer base increasing power of wholesalers

### Notes

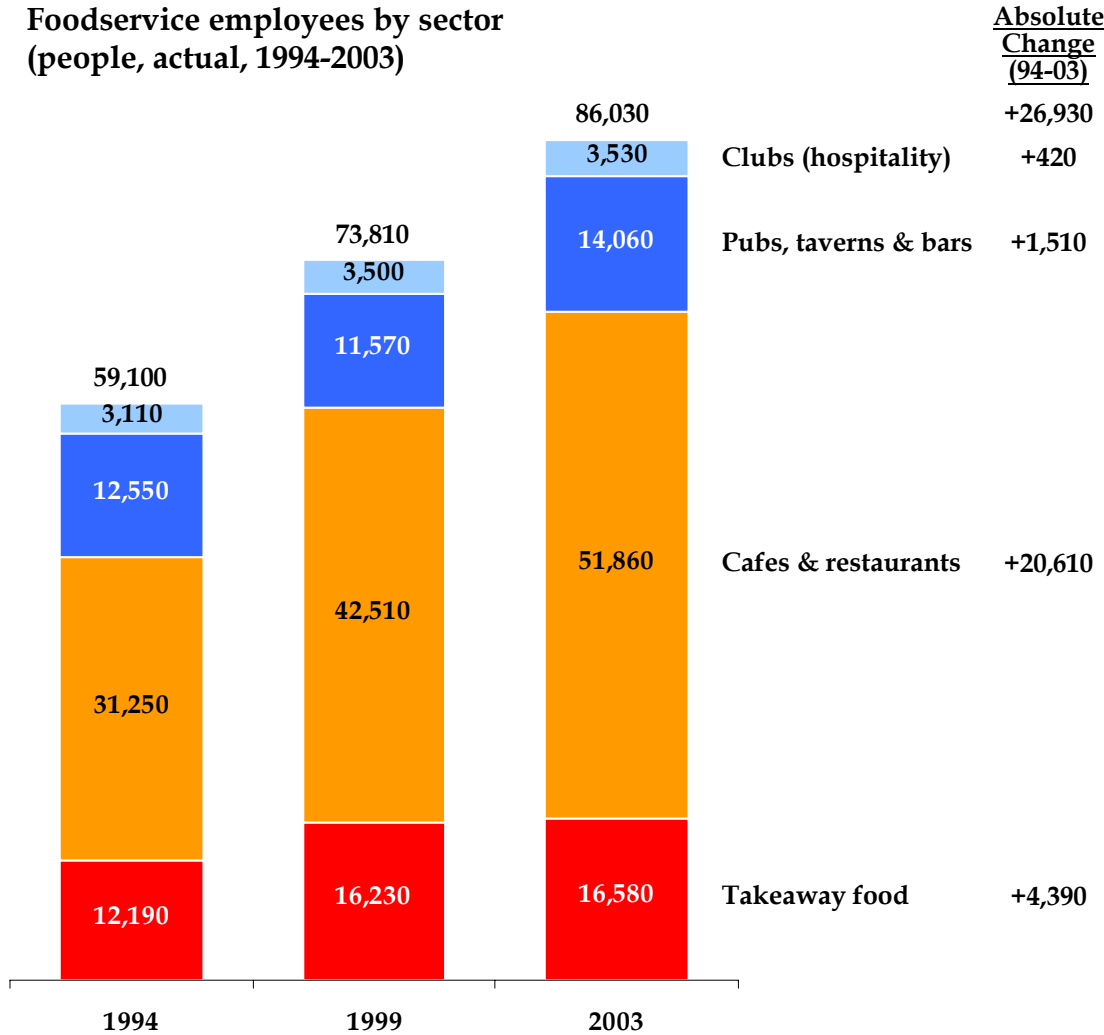
- Defined as businesses registered for GST purposes (+\$30,000pa)



# NUMBER OF FOODSERVICE EMPLOYEES

The café and restaurant segment has added over 20,000 employees in the past decade

Foodservice employees by sector (people, actual, 1994-2003)



### Discussion Points

- Role of industry employees in food decision making
- Training requirements

### Notes

- Includes working proprietors
- Total employees not FTE