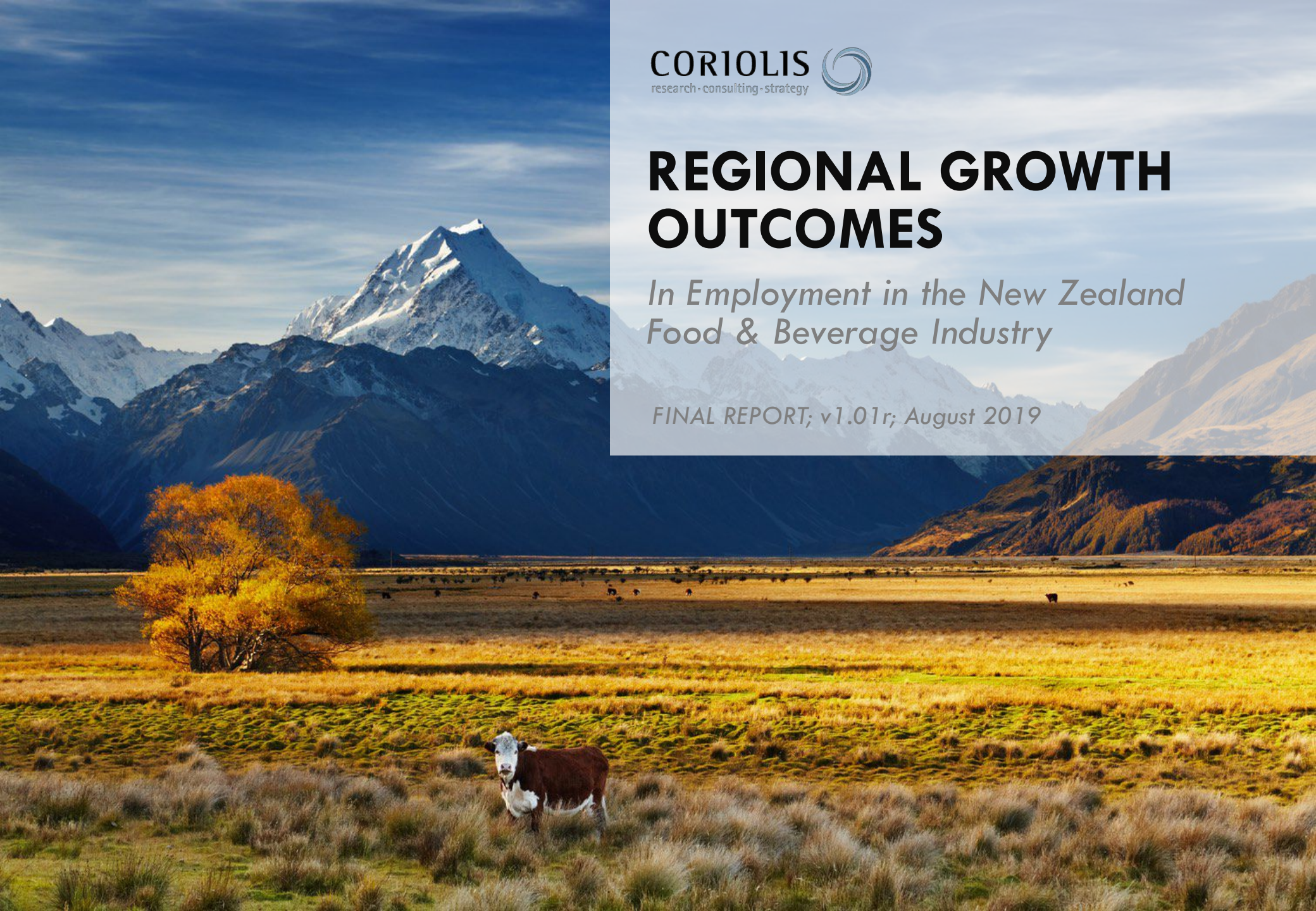


# REGIONAL GROWTH OUTCOMES

*In Employment in the New Zealand  
Food & Beverage Industry*

*FINAL REPORT; v1.01r; August 2019*



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# REGIONAL GROWTH OUTCOMES

*In Employment in the New Zealand Food & Beverage Industry*

FINAL REPORT

August 2019

V1.01r



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# EXECUTIVE SUMMARY

## FOOD IS IMPORTANT

New Zealand is a temperate climate country the size of Italy, Japan or the United Kingdom, but with the population of Singapore. The country has an abundance of natural resources spread across a small population. Much of New Zealand's success to date in food has come from this simple fact.

From the 19th Century to today, the food and beverage industry has played an outsized role in the economy, the importance of which is difficult to overstate.

Food production uses almost half of New Zealand's land and much of the surrounding ocean. Food manufacturing accounts for 32% of New Zealand's total manufacturing GDP. At \$34b, food is the country's major export industry generating two thirds (65%) of merchandise exports and close to half (46%) of total exports (both goods and services).

The core production (farms and orchards) and manufacturing parts of the food industry directly support 219,000 jobs. When the wider food chain is taken into account – which includes food service, food wholesaling and food retailing – the industry employs close to half a million people, or one in five workers. These jobs are not concentrated in Auckland; they are spread all across the country. In regions outside Wellington and Auckland, this chain directly employs 20–40% of the working population, making it the core economic base for both small rural communities and the larger regional cities.

## CHANGE IS OCCURRING

The New Zealand food production system has evolved over many years to be a highly efficient producer of a few major commodities, with growth based on increasing volumes, and relentless productivity improvements.

Farming is a dynamic industry undergoing a fundamental long-term shift to fewer, larger production units. Over the last two decades, New Zealand has seen a more than 30% fall in farm unit numbers. This shift to fewer units is playing out across all regions and most sectors.

Total on-farm employment, including owner-operators, has seen a net loss of 12,300 jobs since 2000. On-farm jobs are down across most regions, other than Canterbury, Otago and the West Coast.

At the same time, over the last two decades, the number of food processing firms has increased by 50% and more than 13,500 jobs have been created. These jobs are not just on the factory floor, but in a wide variety of roles such as marketing, sales, branding, package design, and new product development. This growth is occurring across all regions and most sectors.

---

## DAIRY

Dairy is the competitive backbone of the New Zealand F&B economy creating over 53,000 direct jobs. Dairy farms are (1) getting larger, with (2) more land is converting to dairy and (3) more milk is being produced per cow, leading to more milk overall as a result, but with fewer people overall on-farm. Processing unit numbers have more than doubling in the last 18 years (with particularly strong growth in Auckland and the Waikato). Employment in processing has grown significantly over the same period as a result of increased volumes – growing from 8,200 in 2000 to 13,000 in 2018.

## MEAT

Meat is the largest overall employer in the New Zealand food industry, both on-farm and in processing. However, farm unit numbers are decreasing and meat production is flat to falling. There are currently 328 processing units nationally, a net increase of 28 units in 18 years. Unfortunately, industry drivers suggest it is unlikely that significant net new employment can be created.

## POULTRY

Poultry meat currently employs 1,500 people on-farm and 3,600 people in processing. Farm units are increasing, and farm sizes are growing (more birds per farm) leading to growing meat production. While processing unit numbers are relatively stable, the sector is creating jobs across the four key poultry producing regions (Auckland, Waikato, Canterbury and Taranaki).

## SEAFOOD

Seafood is consolidating around both larger boats and larger processing facilities at key port locations. This consolidation has been driven by a total landed volume that has been declining over the last 20 years, and has led to fewer overall jobs. Aquaculture currently produces about a fifth of total volume and it is the only sector with potential to create real growth. The South Island leads in share of total seafood production (72%) and employment.

## FRUIT AND VEGETABLES

The fruit and vegetable sector employs 28,100 people on-farm and 9,100 people in processing and wholesaling. However, overall on-farm metrics, both units and jobs, are in decline. On the other hand, fruit and vegetable processing is growing. Employment and unit growth in processing is generally positive.

## ARABLE CROPS, SEEDS AND GRAINS

The Arable crop/grain-based sector employs 6,200 people on-farm and 6,600 people in processing. Canterbury has almost 50% of all crop area and the largest number of units overall. Arable crop area is growing, but much of this growth is being driven by feed for the dairy sector. Growth is occurring across the country. The sector is seeing both (1) more farms and (2) larger farms over a larger area. Employment is increasing across the country with a few exceptions.

Grain-based foods processing, the other main user of arable crops, has a stable number of processing units. However, employment growth is occurring.

---

## PROCESSED FOODS

Processed Foods is a large and diverse sector that primarily combines different ingredients (e.g. meat and vegetables) into finished consumer-ready products.

There are currently 12,000 Processed Foods processing jobs in New Zealand, almost the same number as are employed in dairy processing (despite the latter getting the lion's share of attention). The sector is spread across almost 1,000 processing units and activities are located across the country. However, a third of all operations are clustered in Auckland. Growth metrics are strong. The number of processing units is increasing annually at 4% (CAGR). This growth of new processing operations is driving down average employment per unit but growing total employment. Employment growth varies by region; Northland and Hawke's Bay are achieving double digit annual growth rates.

## WINE

The wine industry supports 8,800 direct jobs, 4,800 in grape growing and 3,900 in wine production. Wine is showing strong overall growth on-farm and in processing; however, consolidation and scale in the industry is resulting in a decline in overall jobs/litre of wine produced. The number of wineries in New Zealand has stabilised over the last 8 years (438 in 2018) coming off strong growth through the 1990's and 2000's. Winery growth is occurring in Otago and in Wellington, particularly in the Wairarapa. Due to production growth, New Zealand wineries are creating jobs and these jobs are spread across the key wine regions.

## OTHER BEVERAGES

Given many beverages contain water as the main ingredient, most beverage categories are not constrained by ingredient supply. New Zealand has substantial water, growing hop production, growing whey production, growing sugar refining supply and significant fruit volumes. Overall, the number of non-wine beverage manufacturing operations is growing, with the 373 units spread across the country. The industry employs 3,700 people, 60% in Auckland. Beverage employment growth varies by region with Auckland, Waikato, Hawke's Bay, Wellington and Otago all doing well.

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## *This project has five clear objectives*

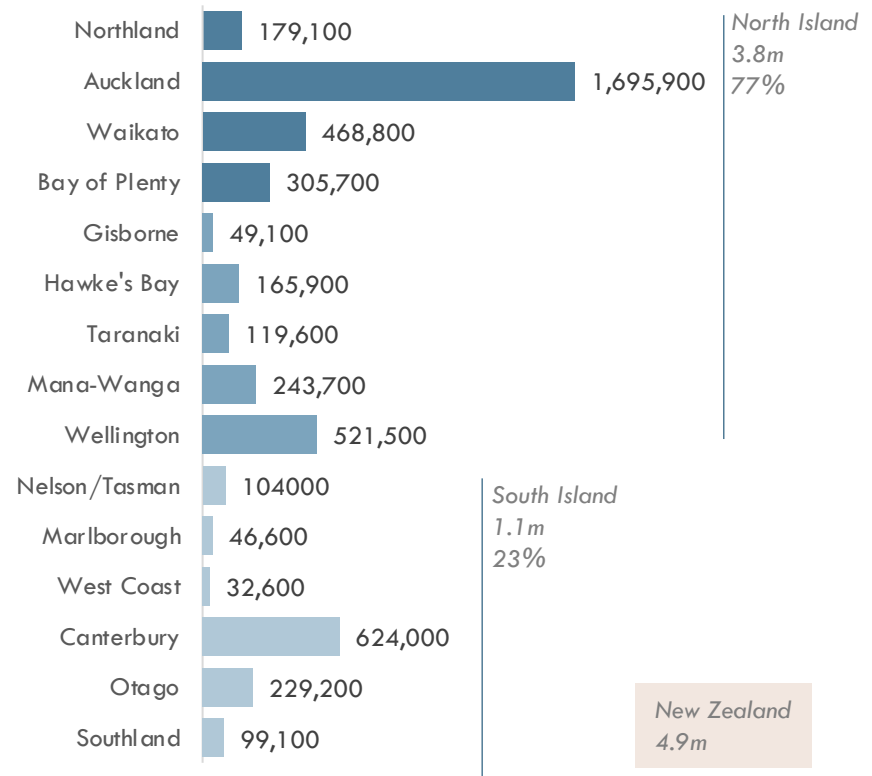
1. Move beyond typical 'aspirational, narrative-based' approach to regional strategic thinking in regards to food & beverage growth
2. Provide fact based/data driven foundation analysis to the regions of New Zealand
3. Benchmark relative performance between regions to identify gaps
4. Provide clear inputs into regional strategy formation initiatives rather than proposing a strategy for every region of the country
5. Do not duplicate previous research (trade data etc.) but add to existing findings

# Analysis is conducted at the level of the fifteen\* regions of New Zealand

## NEW ZEALAND REGIONS 2019



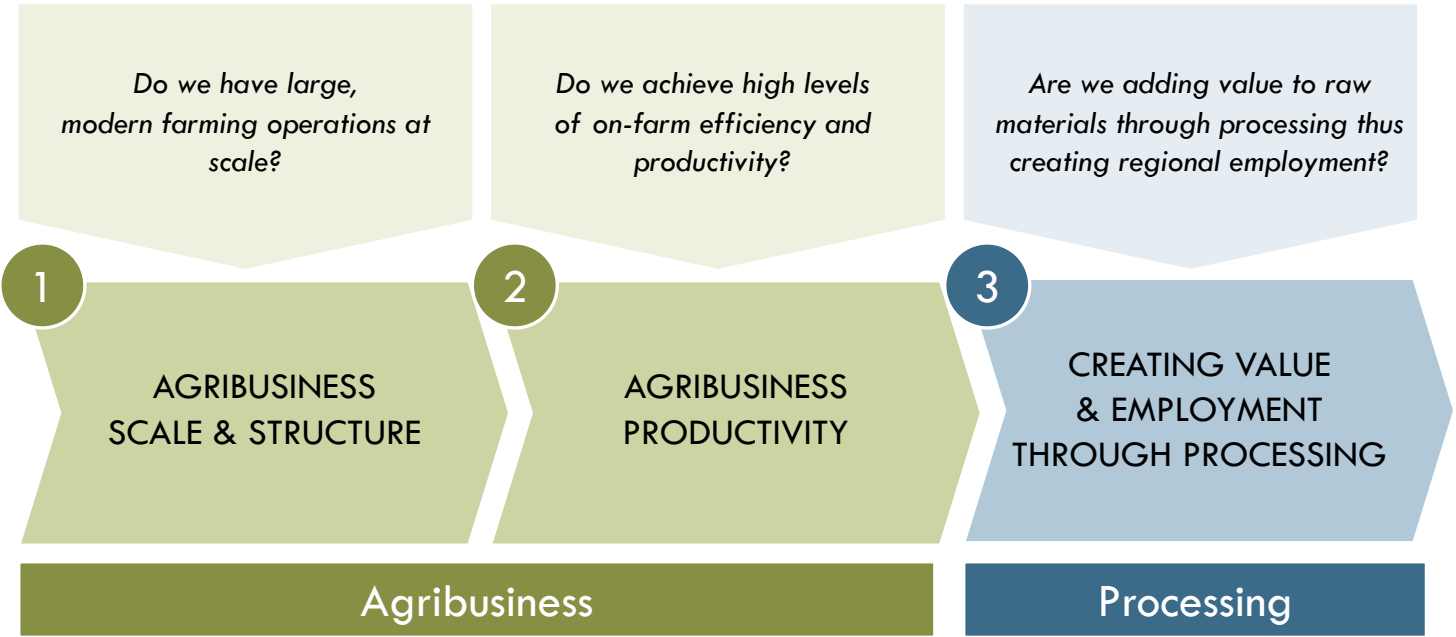
## POPULATION BY REGION 2018



\*Nelson and Tasman data combined in the research; See Appendix for Regional Snapshots; Source: MBIE Regional database, Coriolis analysis



*For each sector, this analysis looks at three high-level drivers of regional food & beverage productivity and employment*



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# Why do we care about the New Zealand food & beverage industry?

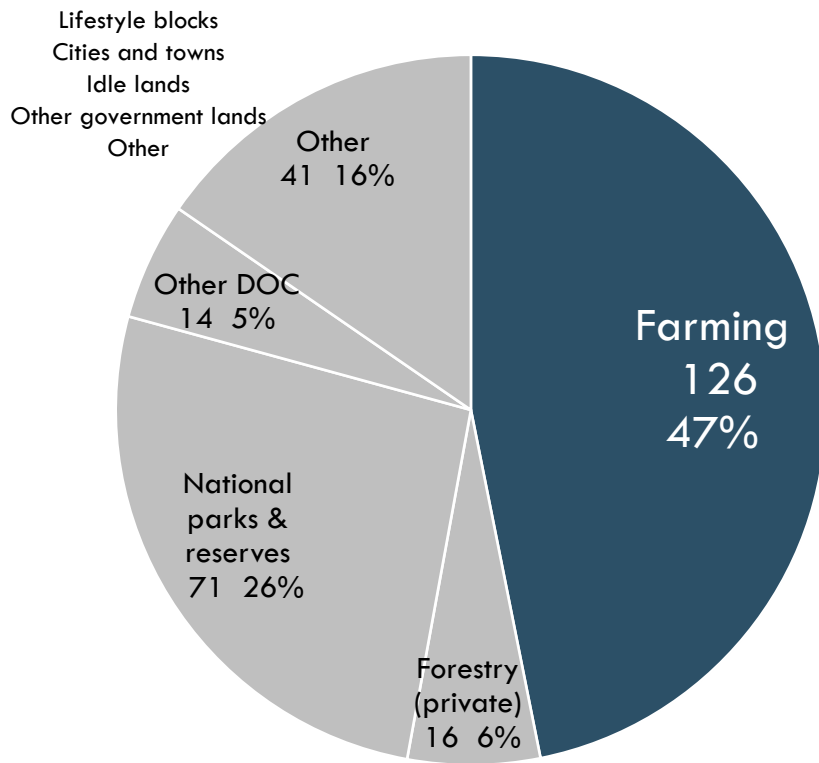


## WHY FOOD?

- Food production uses almost half of New Zealand's land and much of its oceans
- The wider food chain directly employs one in five working people in the country
- In regions outside of Wellington & Auckland, the wider food chain directly employs 20-40% of the working population
- Food & beverage directly accounts for a third of total New Zealand manufacturing output
- Food & beverage is the major New Zealand export industry, accounting for almost half of total goods and services exports
- The food & beverage industry achieves a large trade surplus, while most other sectors are underperforming or in deficit
- Food & beverage is growing exports strongly, where most other sectors are underperforming or going backwards
- New Zealand has the highest 'revealed comparative advantage' in food & beverage of any major exporter
- New Zealand's success in food & beverages is underpinned by fundamental long term drivers

# Food production uses almost half of New Zealand's land and much of its oceans

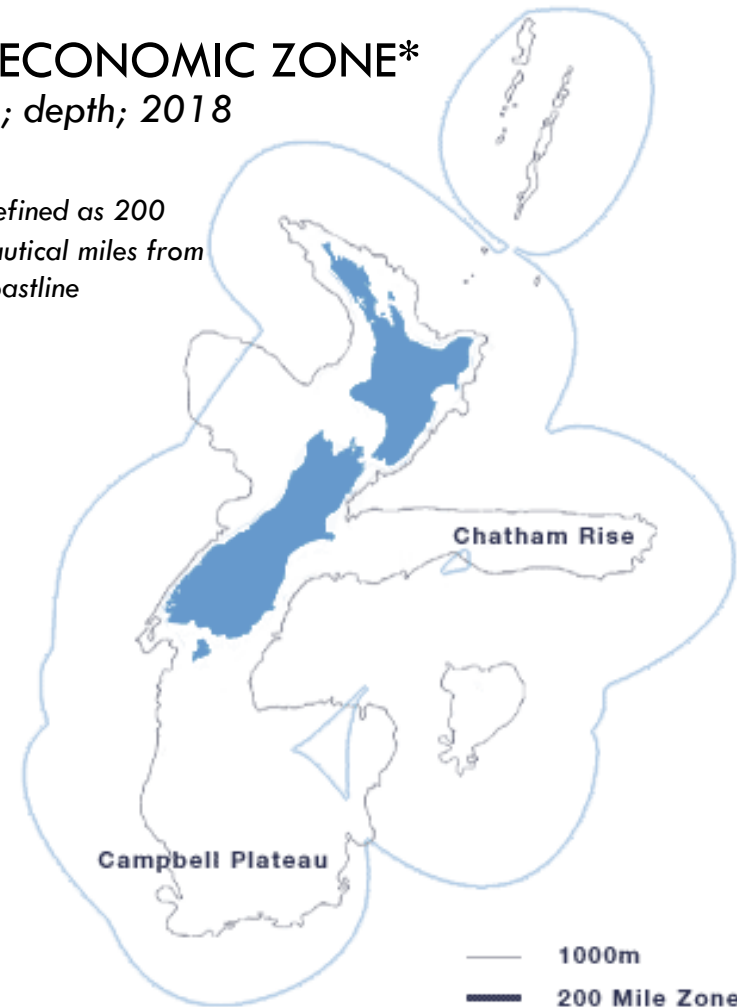
**NEW ZEALAND LAND USE**  
km<sup>2</sup>; 000; 2010



TOTAL = 268,000 km<sup>2</sup>

**NZ ECONOMIC ZONE\***  
Area; depth; 2018

Defined as 200 nautical miles from coastline

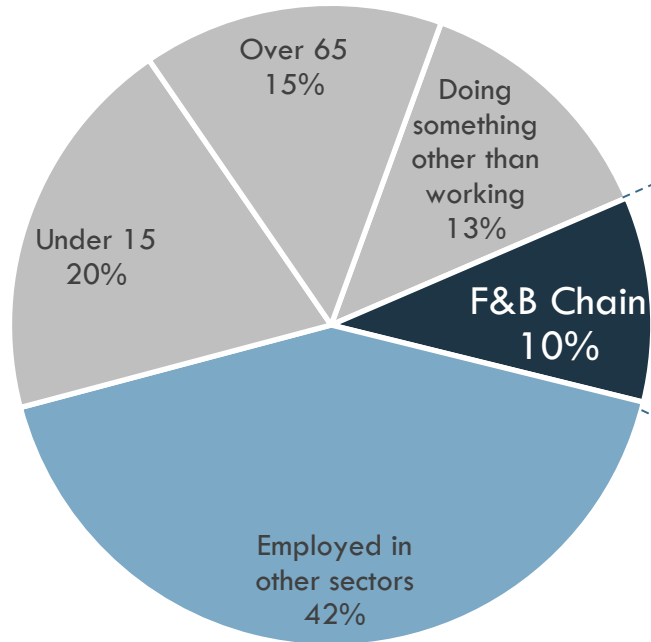


\*EEZ; Note: a nautical mile is 1,852 metres; Source: Statistics NZ; Department of Conservation; Sealord; Coriolis analysis

# The wider food chain directly employs one in five working people in the country

## NZ POPULATION BY EMPLOYMENT

People; m; 2017

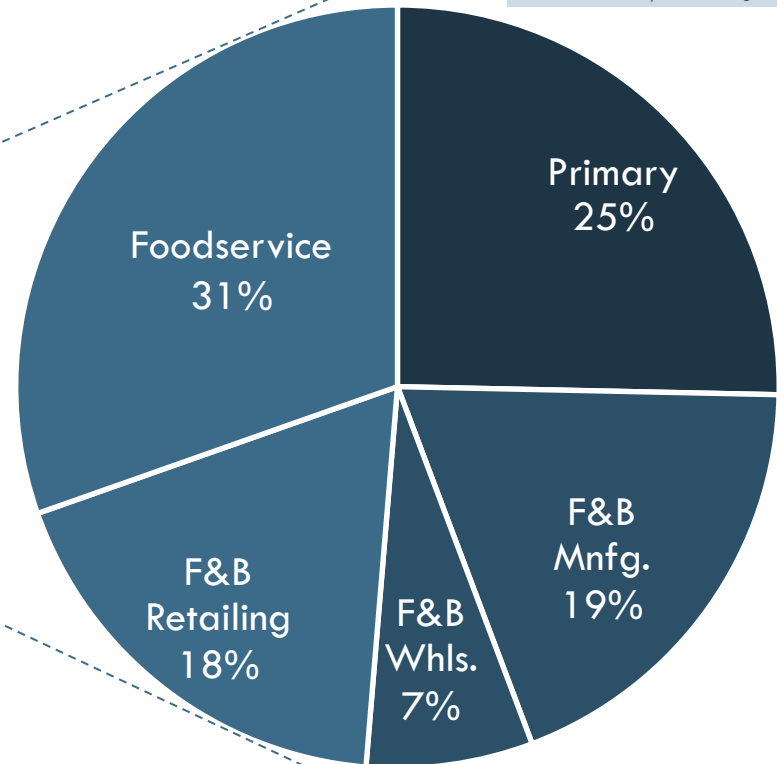


Total = 4.8m

## FOOD CHAIN EMPLOYMENT BY SECTOR

People; %; 2017

NOTE: Tight definition; excludes all inputs and support services; likely closer to 1/3 including those



Total = 493,000

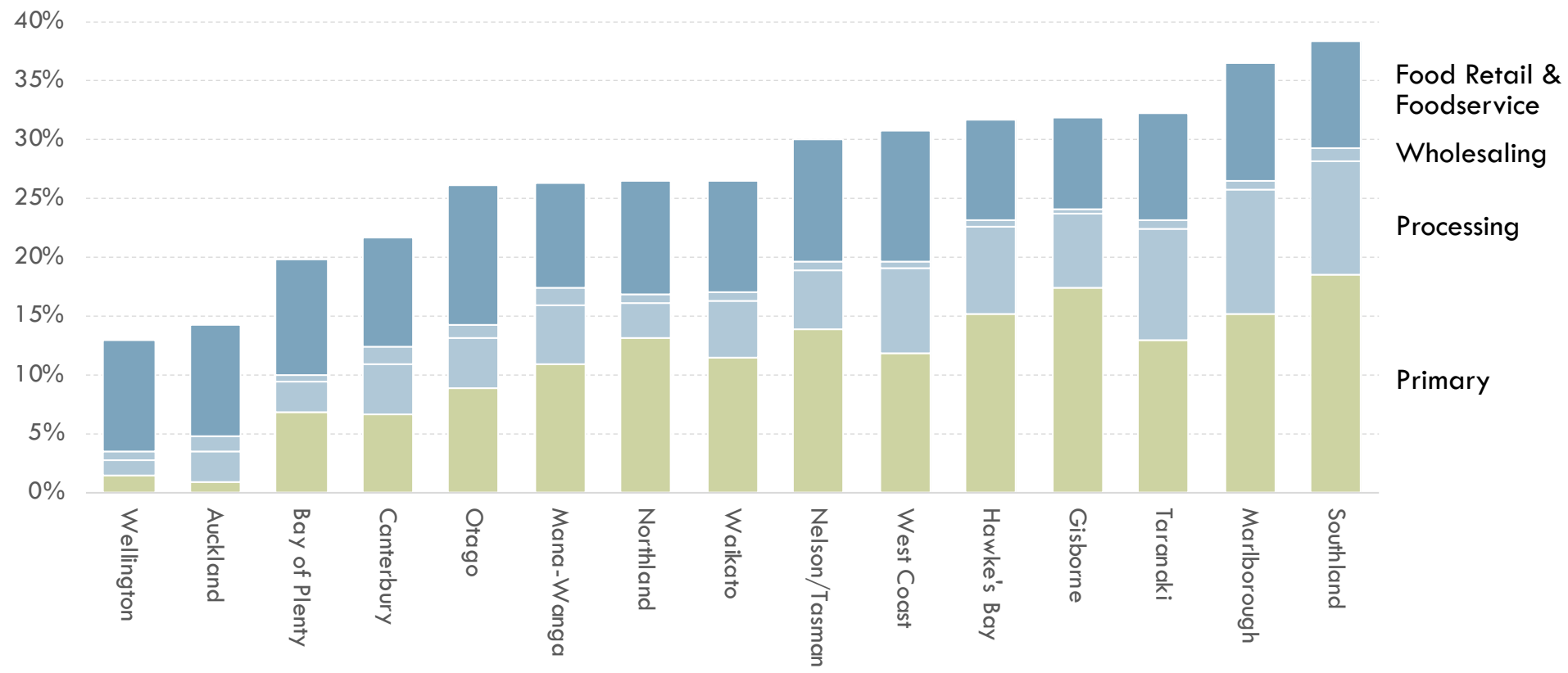
... or one in five of working population



# In regions outside of Wellington & Auckland, the wider food chain directly employs 20-40% of the working population

PERCENT OF REGIONAL EMPLOYMENT IN THE FOOD CHAIN  
% of employees; 2018

NOTE: Tight definition; excludes all inputs and support services; likely closer to 1/3 including those

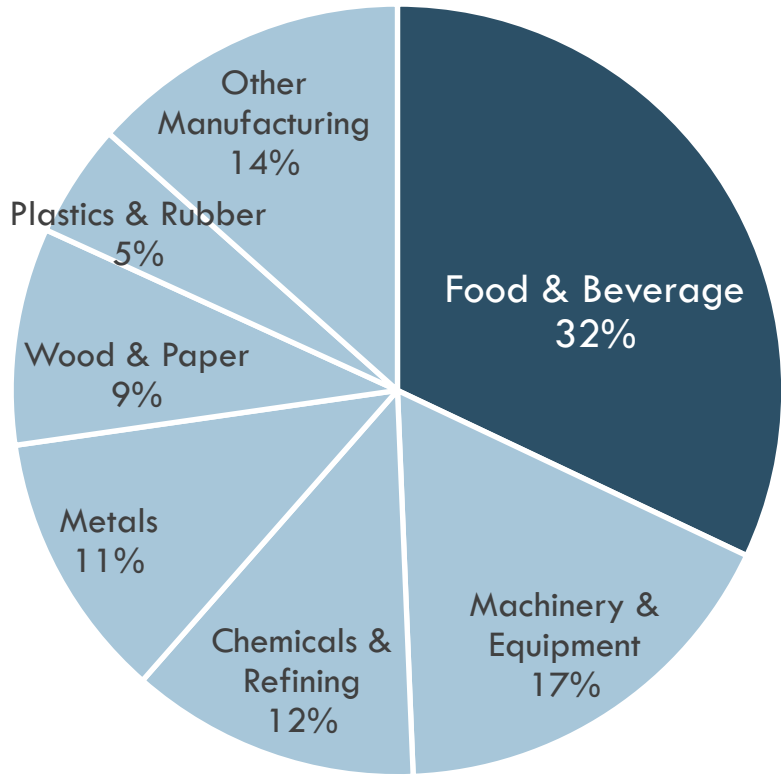


Source: Statistics NZ; Coriolis analysis and classifications

# Food & beverage directly accounts for a third of total New Zealand manufacturing GDP

## REAL GDP VALUE BY MANUFACTURING SECTOR

% manufacturing real GDP; year Mar 2017

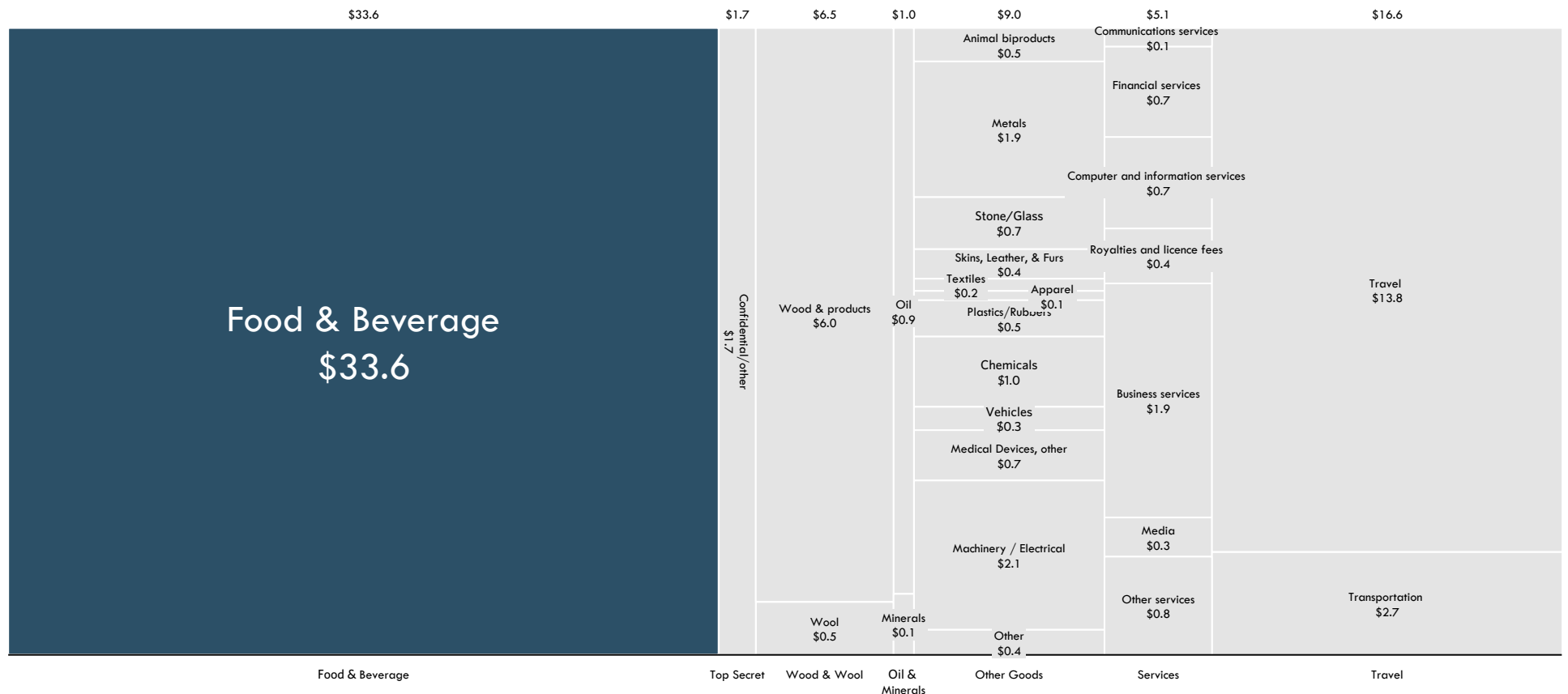


TOTAL = NZ\$23b

Source: MBIE Manufacturing Report; Coriolis analysis

# Food & beverage is the major New Zealand export industry, accounting for almost half of total goods and services exports

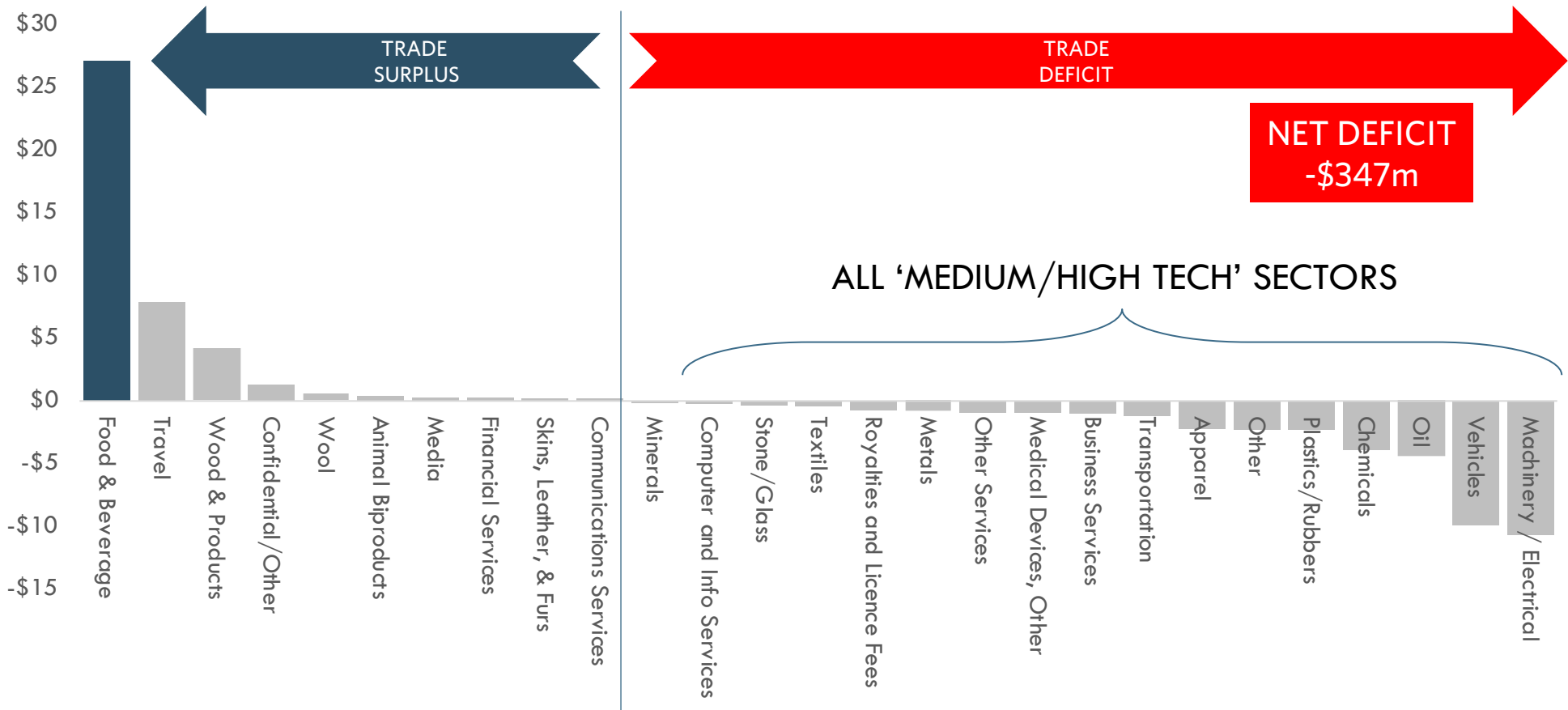
## TOTAL NEW ZEALAND EXPORT OF GOODS AND SERVICES BY CATEGORY NZ\$; b; 2017



Source: SNZ; Coriolis analysis and classifications

# The food & beverage industry achieves a large trade surplus, while most other sectors are underperforming or in deficit

NET TRADE POSITION IN TOTAL NEW ZEALAND TRADE (EXPORTS-IMPORTS)  
NZ\$; b; 2017



# Food & beverage is growing exports strongly, where most other sectors are underperforming or going backwards

10 YEAR NET CHANGE IN TOTAL NEW ZEALAND EXPORTS  
 NZ\$; b; 2007-2017



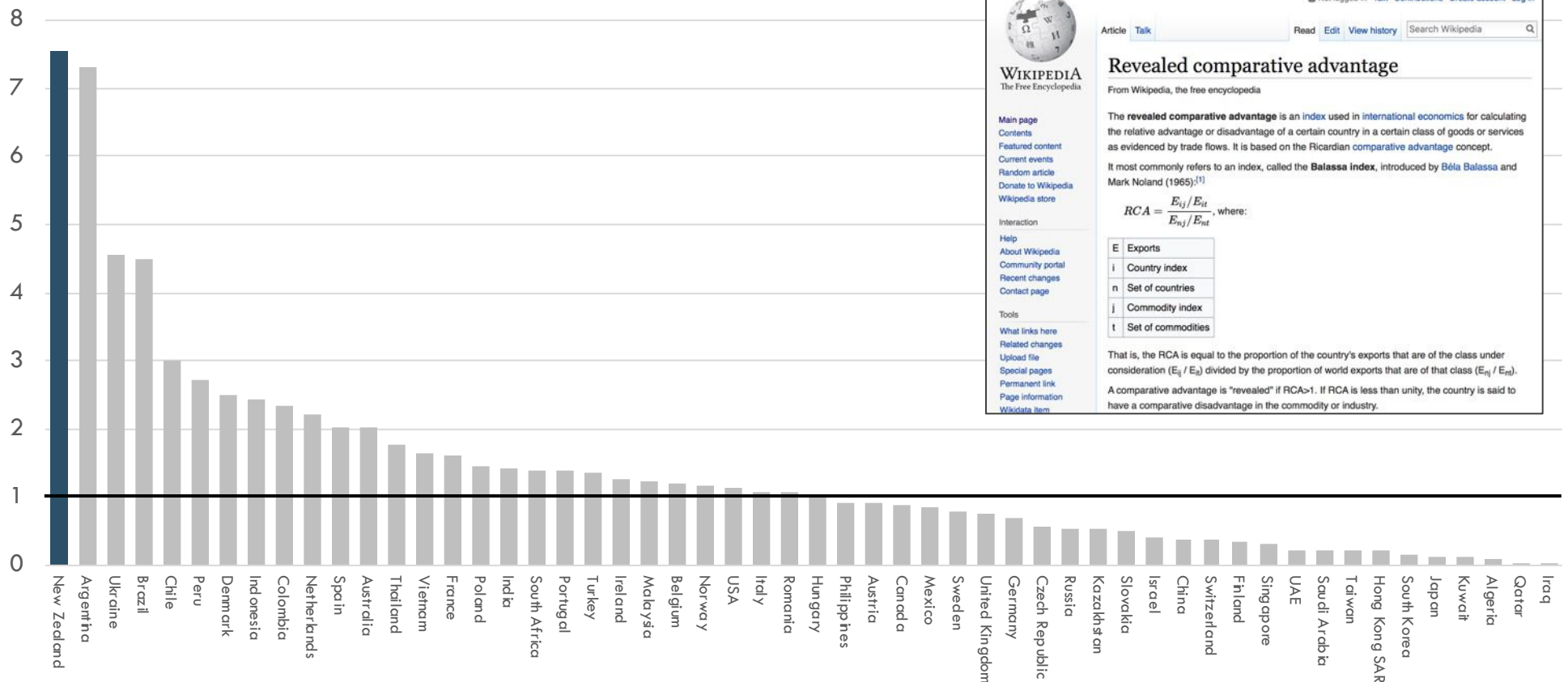
Source: SNZ; Coriolis analysis and classifications



# New Zealand has the highest 'revealed comparative advantage' in food & beverage of any major exporter

## REVEALED COMPARATIVE ADVANTAGE IN FOOD & BEVERAGE

RCA index; top 54 exporting countries; 2016



Wikipedia article snippet for 'Revealed comparative advantage'.

The revealed comparative advantage is an index used in international economics for calculating the relative advantage or disadvantage of a certain country in a certain class of goods or services as evidenced by trade flows. It is based on the Ricardian comparative advantage concept.

It most commonly refers to an index, called the **Balassa index**, introduced by Béla Balassa and Mark Noland (1965):<sup>[1]</sup>

$$RCA = \frac{E_{ij} / E_{it}}{E_{nj} / E_{nt}}$$

where:

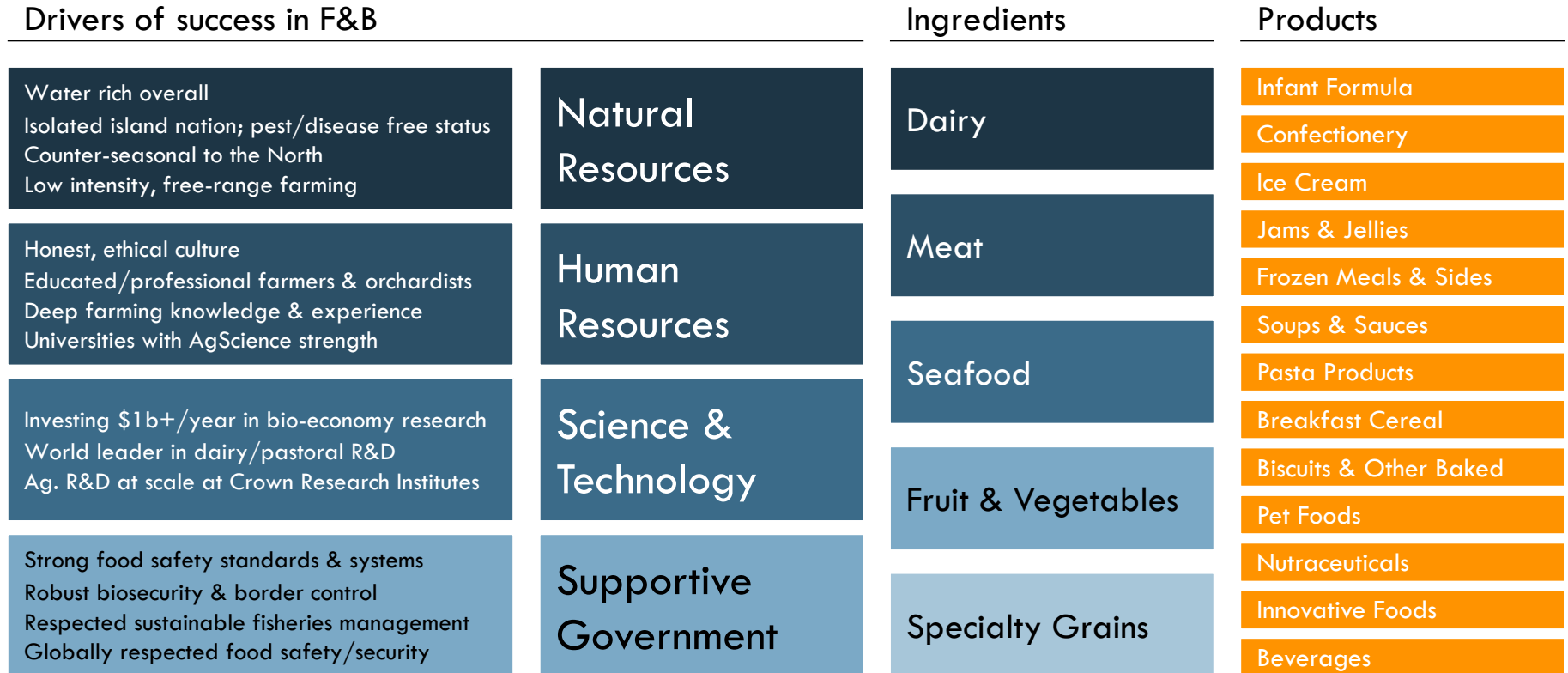
- E Exports
- i Country index
- n Set of countries
- j Commodity index
- t Set of commodities

That is, the RCA is equal to the proportion of the country's exports that are of the class under consideration ( $E_{ij} / E_{it}$ ) divided by the proportion of world exports that are of that class ( $E_{nj} / E_{nt}$ ).

A comparative advantage is "revealed" if  $RCA > 1$ . If RCA is less than unity, the country is said to have a comparative disadvantage in the commodity or industry.

Source: UN Comtrade; SNZ; Wikipedia; Coriolis analysis and classifications

# *New Zealand's success in food & beverages is underpinned by fundamental long term drivers*



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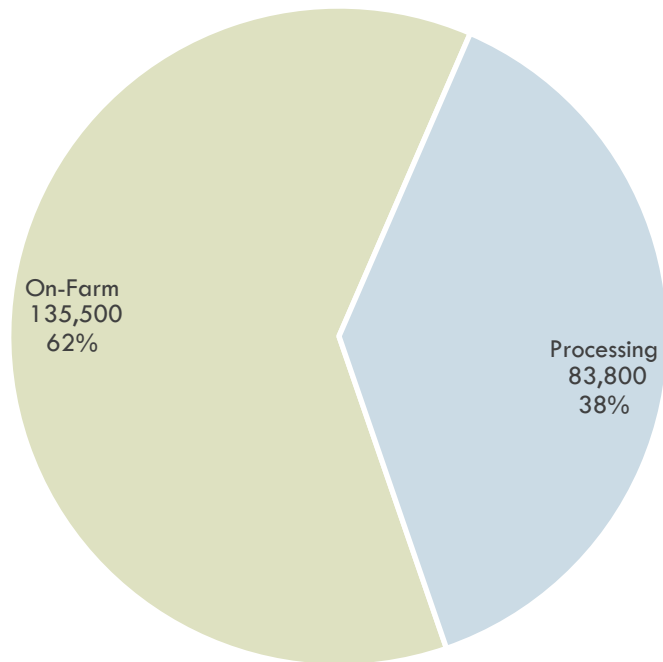
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# The core New Zealand food & beverage industry (on-farm & processing) has a total headcount of about 219,000

## F&B JOBS BY LOCATION\*

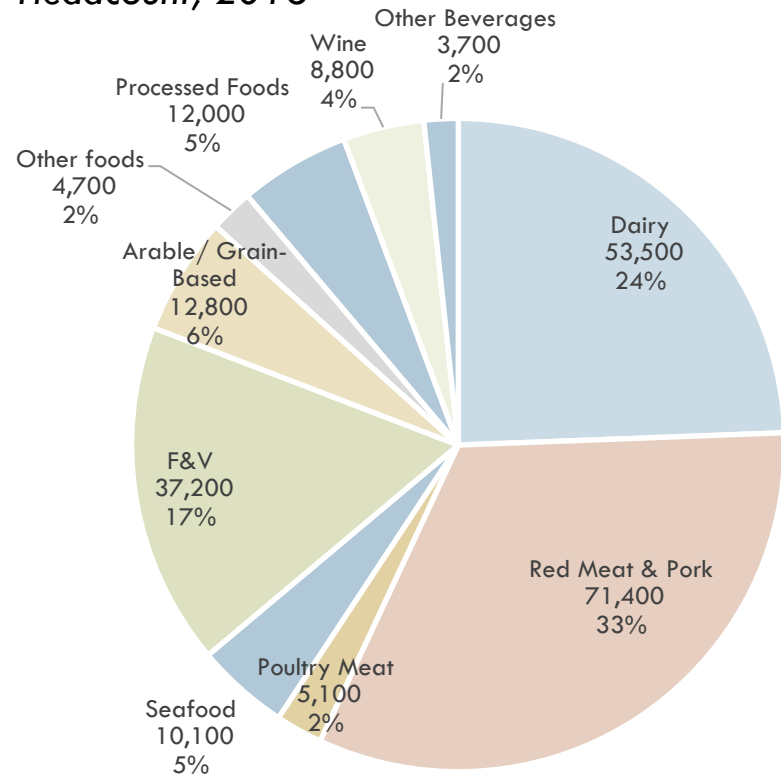
Headcount; 2018



Total = ~219,000

## F&B JOBS BY SECTOR\*

Headcount; 2018



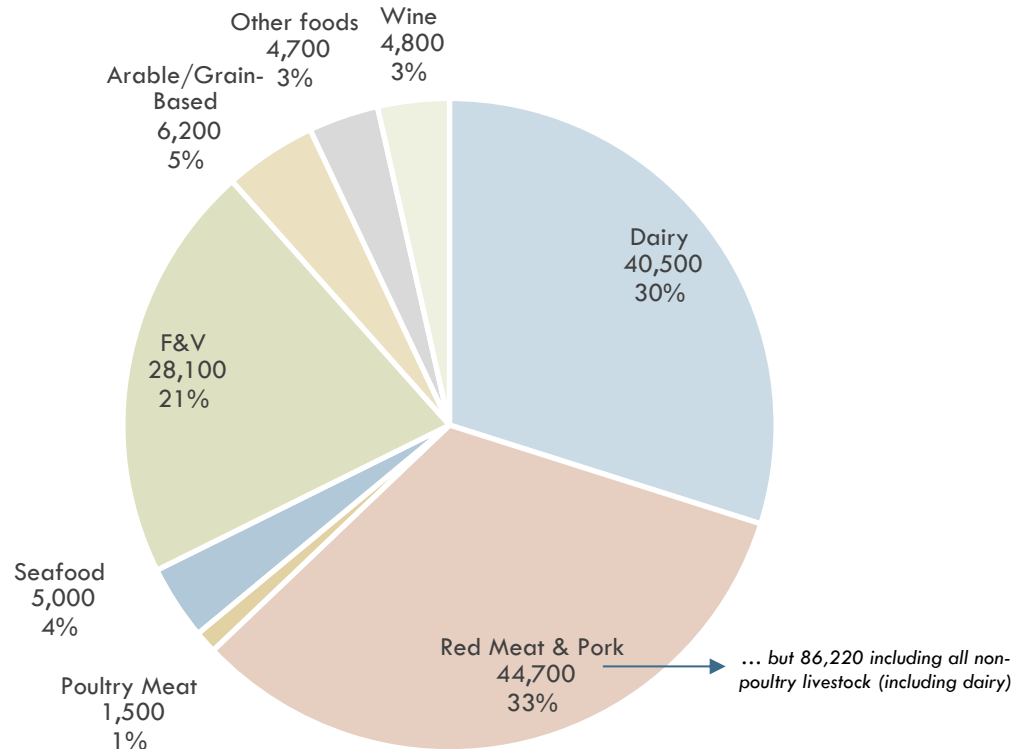
Total = 219,000

TOTALS ROUNDED

Note: Actual total will be larger as this data does not include contract labour (e.g. picking gangs) and other direct labour services to farming; \*Including assumed owner-operators (i.e. non-PAYE); does not include most wholesaling (only seafood and produce); Source: Statistics NZ; Coriolis estimates, modelling and analysis

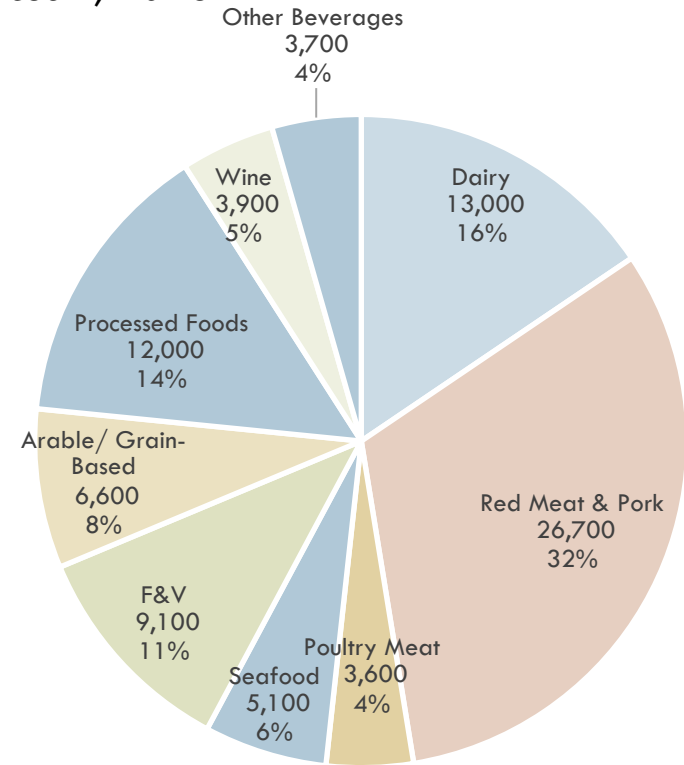
# On-farm currently accounts for about 60% of jobs; post farmgate processing 40%

**F&B JOBS ON-FARM\***  
Headcount; 2018



Total = 135,500  
~60%

**F&B JOBS IN PROCESSING\*\***  
Headcount; 2018



Total = 83,800  
~40%

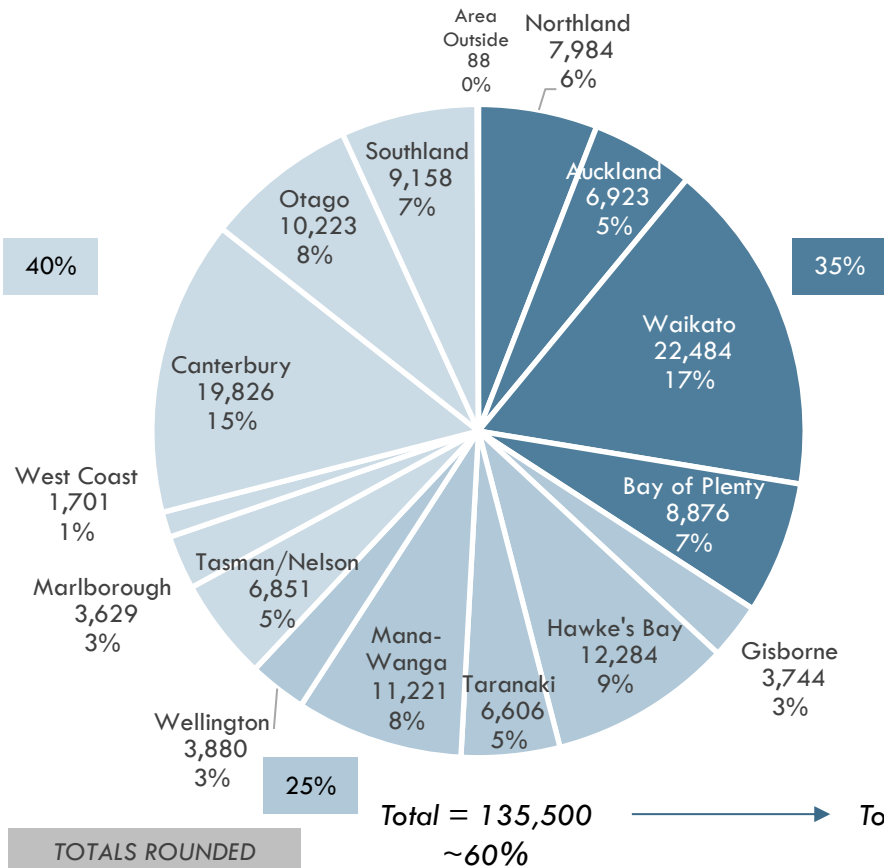
TOTALS ROUNDED

\*Including assumed owner-operators (i.e. non-PAYE); \*\*Some sectors include wholesaling; Note: Other foods (honey & eggs), when processed, are not broken out by Statistics NZ and are therefore included in our defined 'processed foods'; Source: Statistics NZ; Coriolis estimates, modelling and analysis

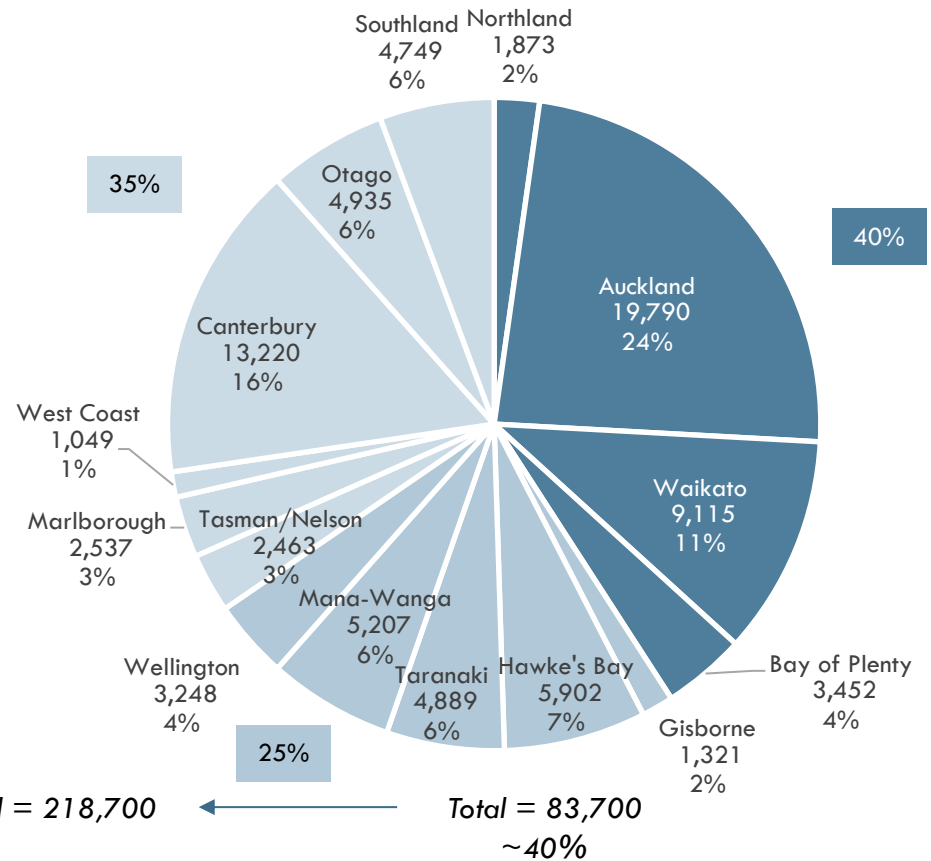


# Both on-farm and processing jobs are spread across the country

**F&B JOBS ON-FARM\***  
Headcount; 2018



**F&B JOBS IN PROCESSING\*\***  
Headcount; 2018



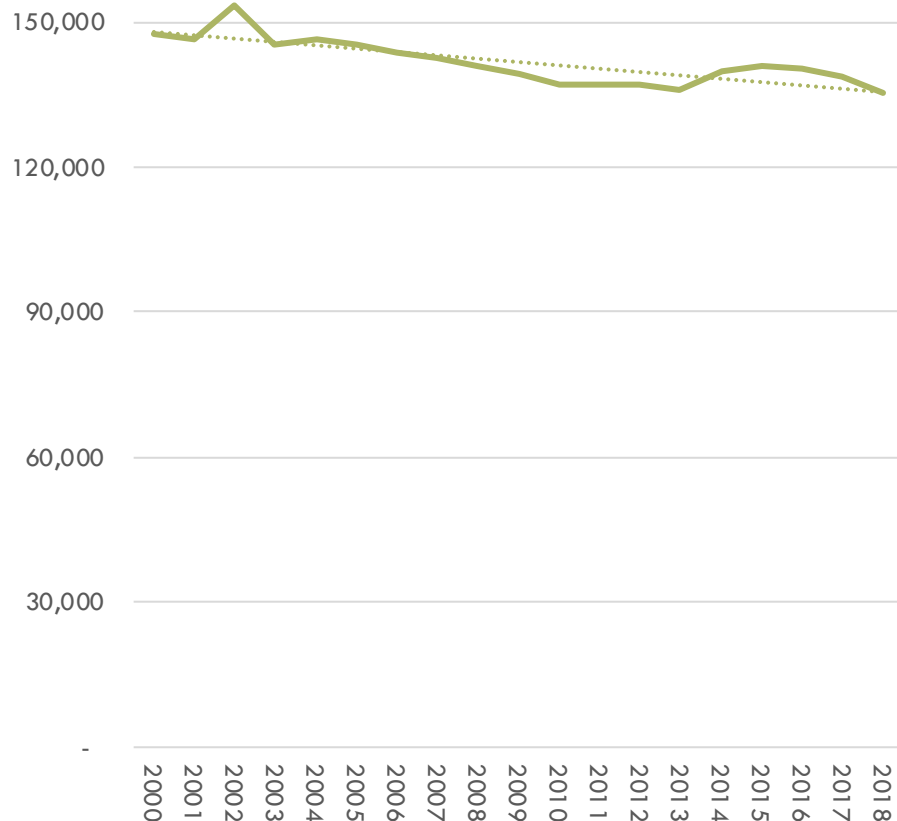
TOTALS ROUNDED

Note: Area Outside = at sea; \*Including assumed owner-operators (i.e. non-PAYE); \*\*Some sectors include wholesaling; Source: Statistics NZ; Coriolis estimates, modelling and analysis

# On-farm employment is falling while processing employment is growing; NZ is adding more jobs (or value) beyond the farm

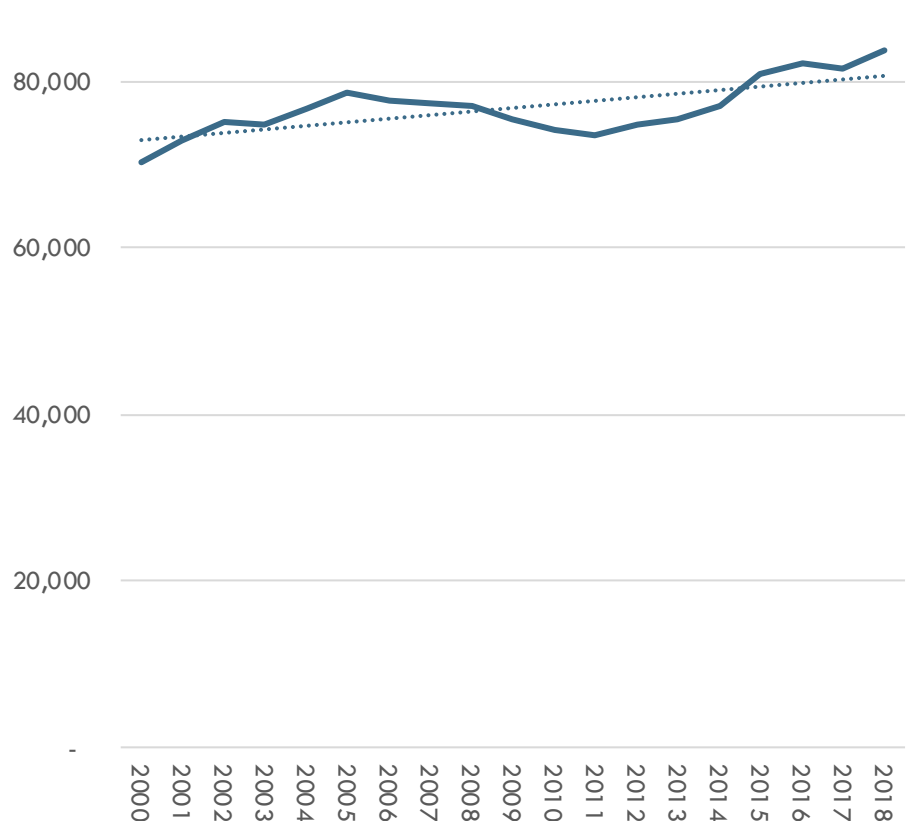
## F&B JOBS ON-FARM\*

Headcount; 2000-2018



## F&B JOBS IN PROCESSING\*\*

Headcount; 2000-2018

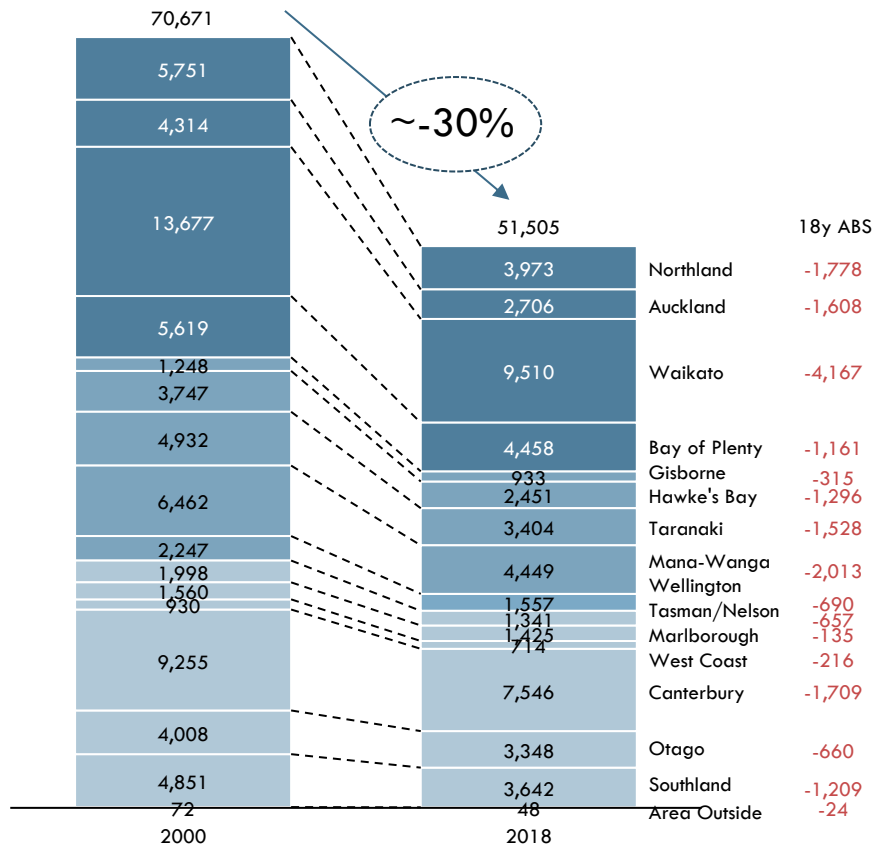


\*Including assumed owner-operators (i.e. non-PAYE); \*\*Some sectors include wholesaling; Note: Other foods (honey & eggs), when processed, are not broken out by Statistics NZ and are therefore included in our defined 'processed foods'; Source: Statistics NZ; Coriolis estimates, modelling and analysis

# This on-farm shift to fewer units is playing out in New Zealand across all regions and most sectors

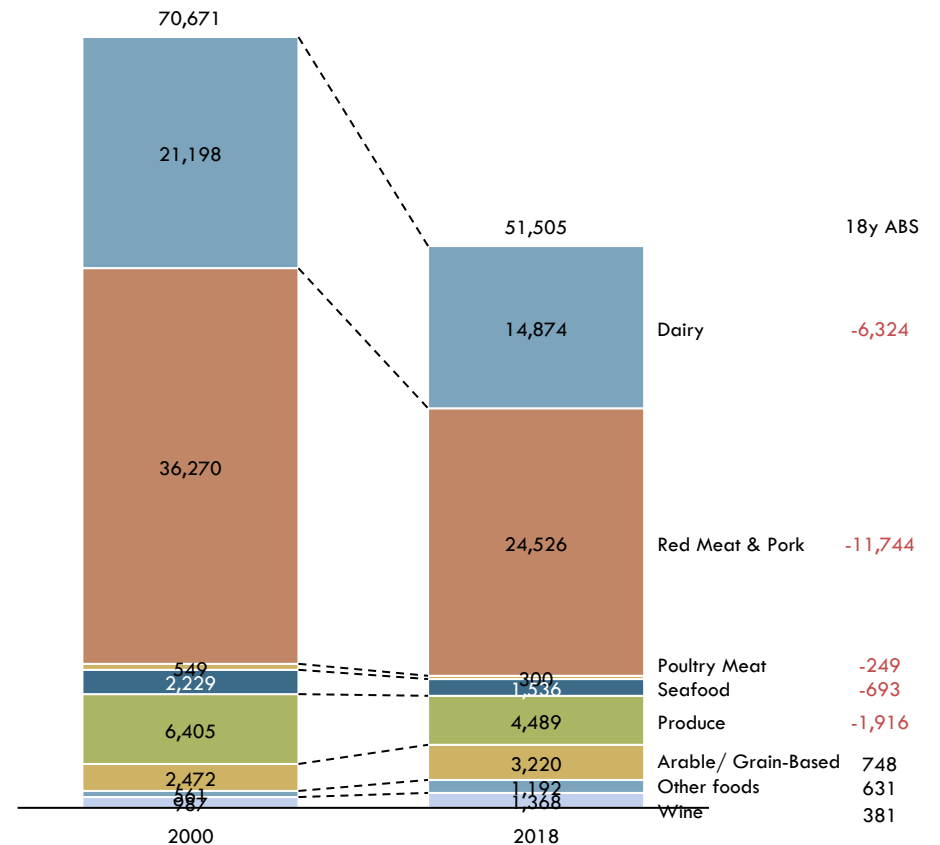
## # OF FARM UNITS BY REGION

Geographic units; 2000 vs 2018



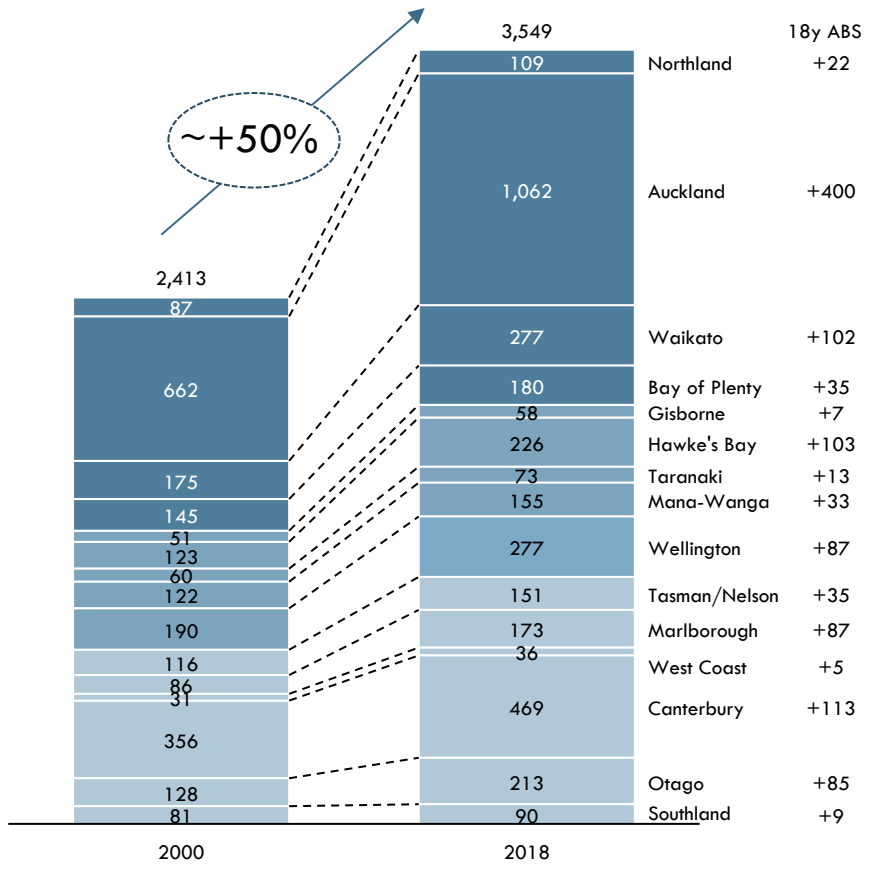
## # OF FARM UNITS BY SECTOR

Geographic units; 2000 vs 2018

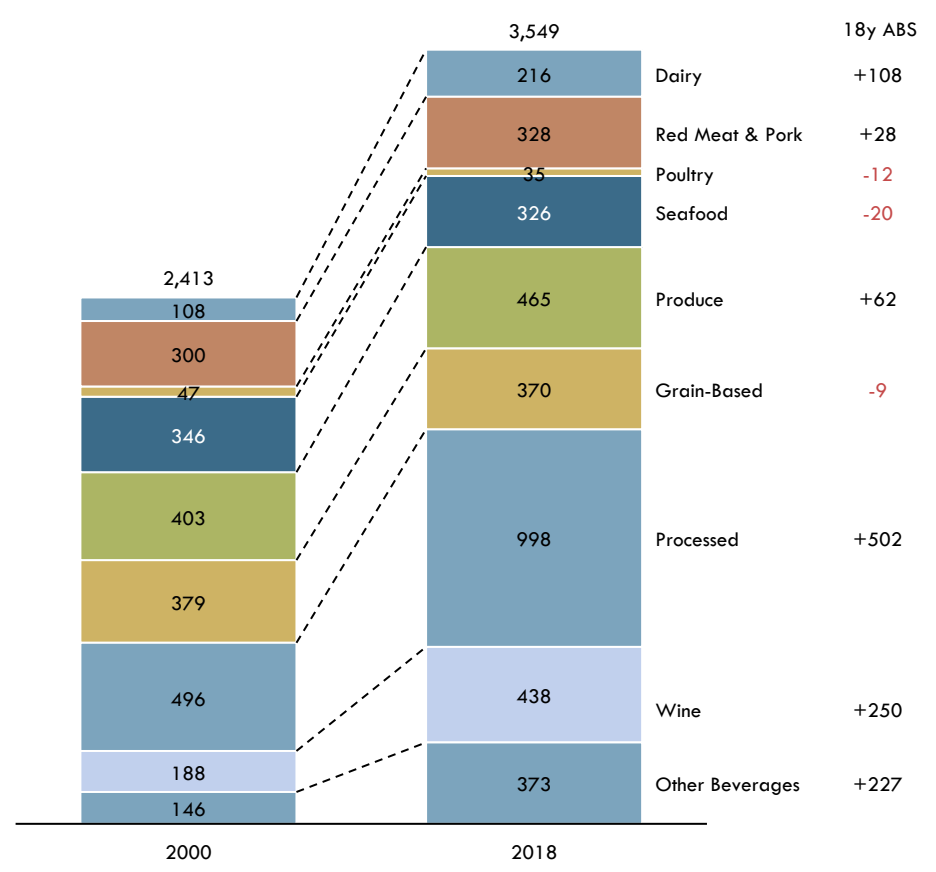


*At the same time, New Zealand has a large and growing food processing sector that is creating new firms*

**# OF PROCESSING UNITS BY REGION**  
Geographic units; 2000 vs 2018



**# OF PROCESSING UNITS BY SECTOR**  
Geographic units; 2000 vs 2018

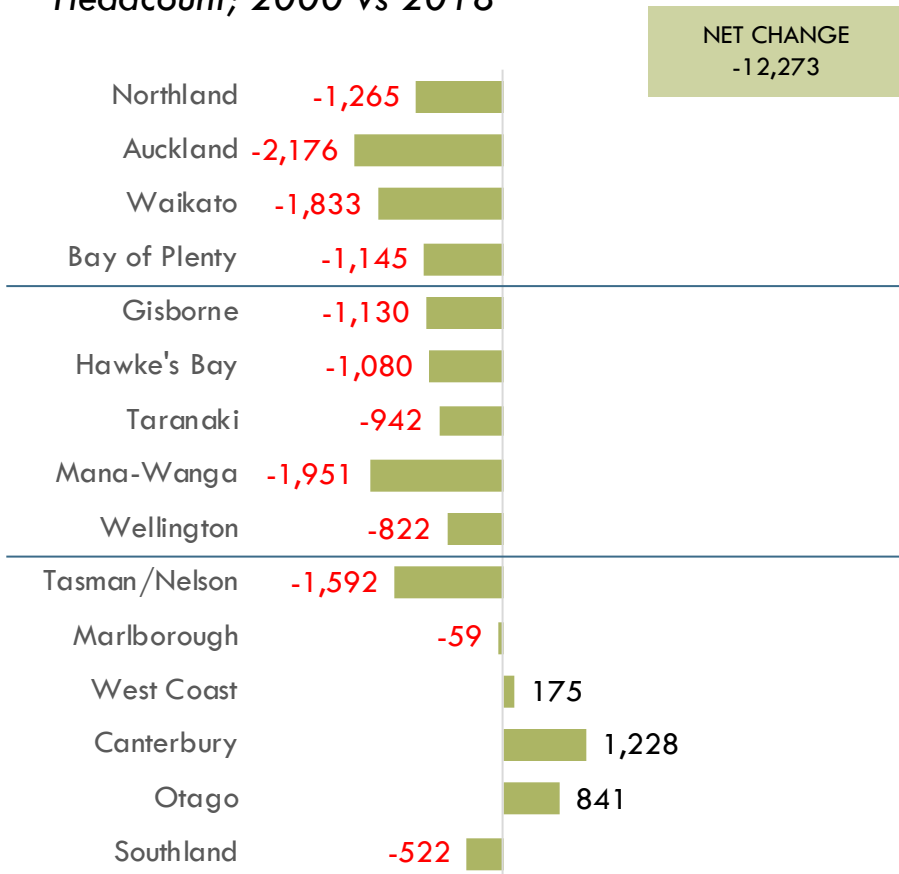


Source: Statistics NZ; Coriolis estimates, modelling and analysis

# Job creation performance varies by region, with on-farm generally down and processing generally up

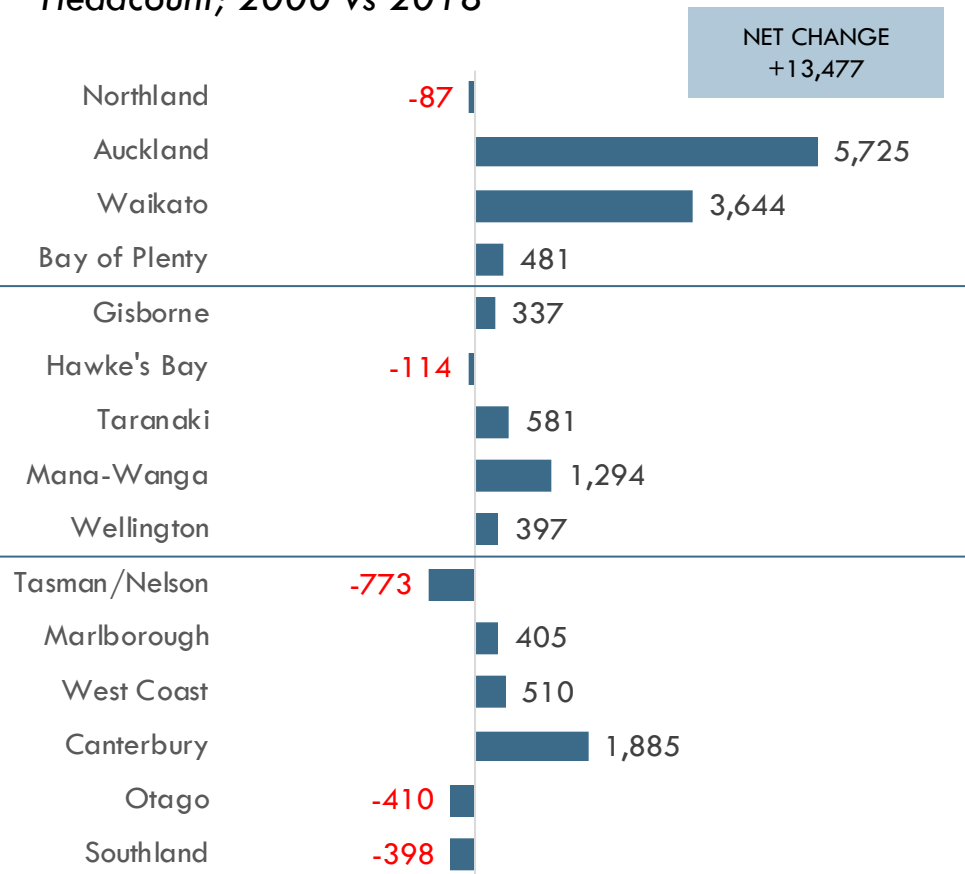
## 18Y CHANGE IN TOTAL ON-FARM JOBS\*

Headcount; 2000 vs 2018



## 18Y CHANGE IN TOT. PROCESSING JOBS\*

Headcount; 2000 vs 2018



\*Including assumed owner-operators (i.e. non-PAYE); \*\*Some sectors include wholesaling; Note: Other foods (honey & eggs), when processed, are not broken out by Statistics NZ and are therefore included in our defined 'processed foods'; Source: Statistics NZ; Coriolis estimates, modelling and analysis



# Most regions created processing jobs since 2000, but lost on-farm jobs; only Canterbury and West Coast created both

Have you created new processing jobs since 2000?

**Yes**

Auckland Waikato Bay of Plenty Gisborne Taranaki Manawatu-Wanganui Wellington Nelson/Tasman Marlborough	Canterbury West Coast
---	--------------------------

**No**

Northland Hawke's Bay Southland	Otago
---------------------------------------	-------

**No**

**Yes**

Have you created new on-farm jobs since 2000?

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## ***SUMMARY FINDINGS: The dairy industry has been creating modest on-farm jobs and significant processing employment***

### **PRODUCTION**

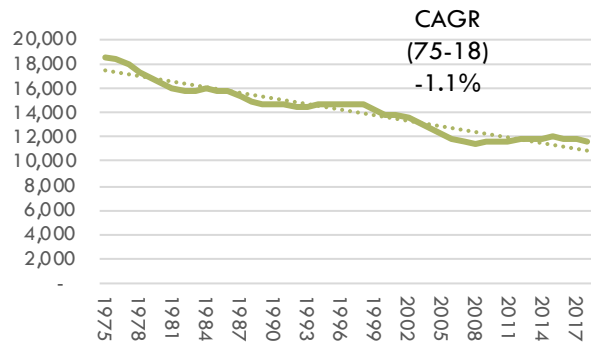
- New Zealand is in a long term trend to fewer, larger dairy units, increasing both total dairy area and animals per hectare
- Average dairy farm size varies by region, with traditional large regions typically having smaller farms (e.g. Taranaki, Waikato)
- Dairy cow density varies by region, with Canterbury having +56% more cows per hectare than West Coast
- While some regions are growing dairy cow densities per hectare, others are not
- There are more cows making more milk, but with fewer farmers, leading to relatively flat on-farm employment

### **PROCESSING**

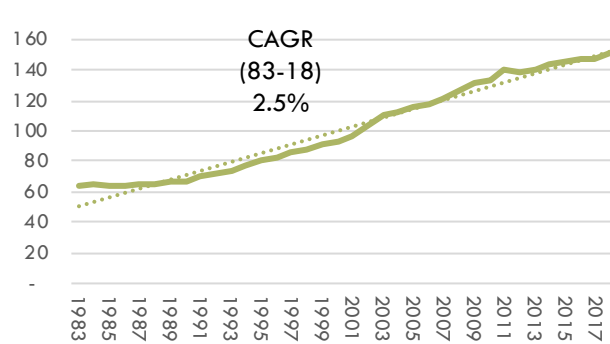
- Dairy processing is creating new firms and employment is growing
- Some regions of New Zealand are creating net new dairy processing units, while others are not
- Auckland, West Coast & Canterbury have created significantly more jobs from their milk over the last decade

# New Zealand is in a long term trend to fewer, larger dairy units, increasing both total dairy area and animals per hectare

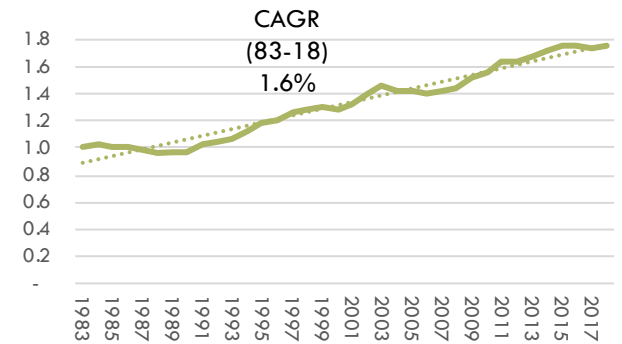
**NUMBER OF DAIRY FARMS**  
Herds; 1975-2018



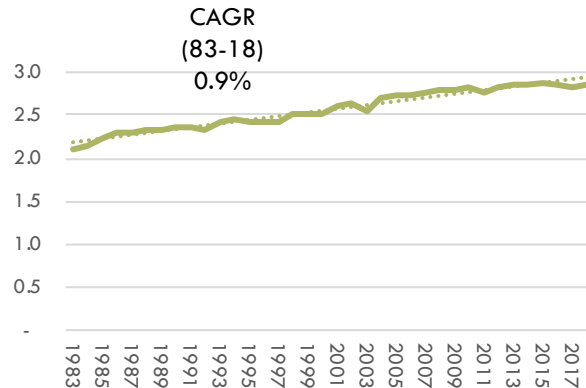
**AVERAGE FARM SIZE**  
Ha/herd; 1983-2018



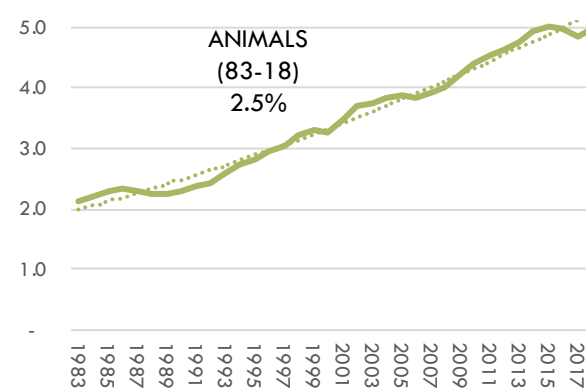
**HECTARES IN DAIRY**  
Ha; million; 1983-2018



**AVG. DAIRY COWS/HA**  
Animals/ha; 1983-2018



**DAIRY COWS**  
Animals; 1983-2018

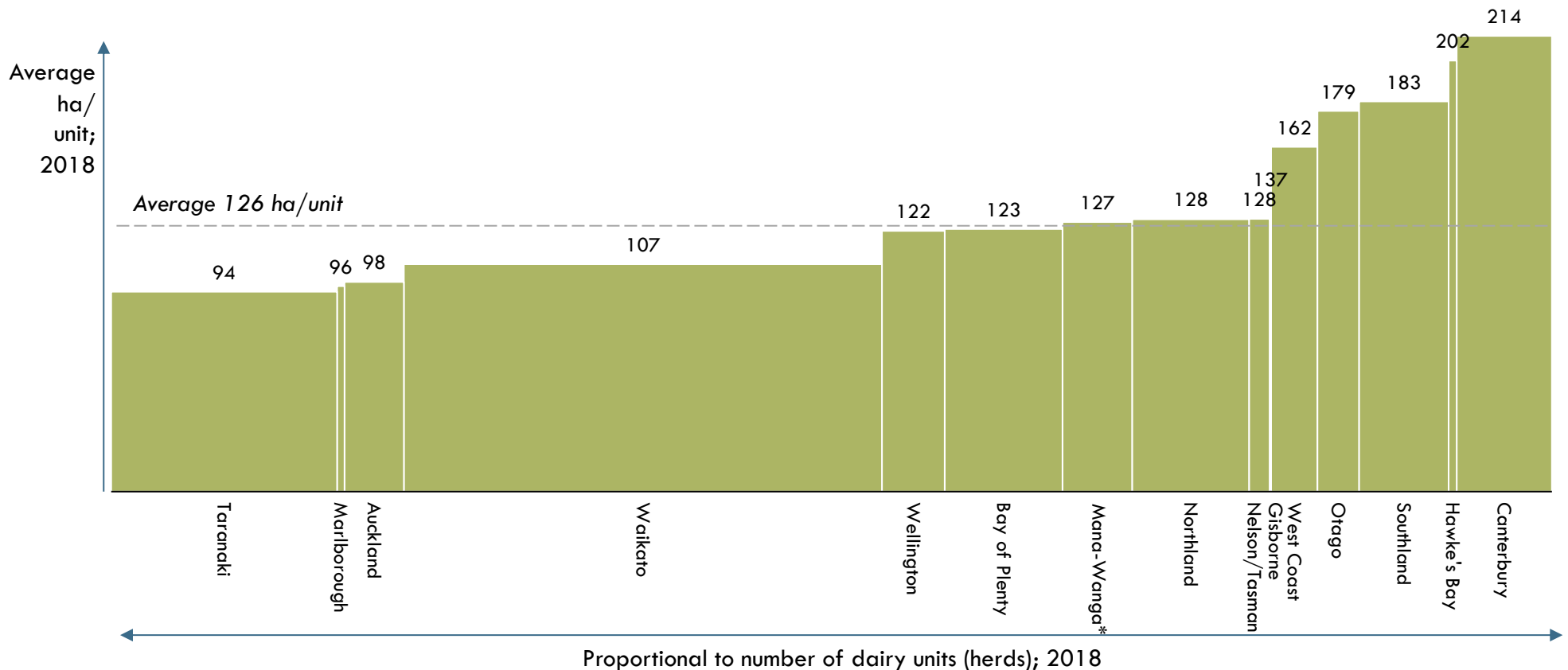


Note: This analysis uses herds rather than Statistics NZ geographic or operational units (as used some other places in this document); these vary for known and understood reasons (e.g. non-bovine farms); Source: Statistics NZ; DairyNZ; Coriolis analysis

# Average dairy farm size varies by region, with traditional large regions typically having smaller farms (e.g. Taranaki, Waikato)

## NUMBER OF DAIRY FARM OPERATIONS VS AVERAGE FARM SIZE

Herds; ha/herd; 2018

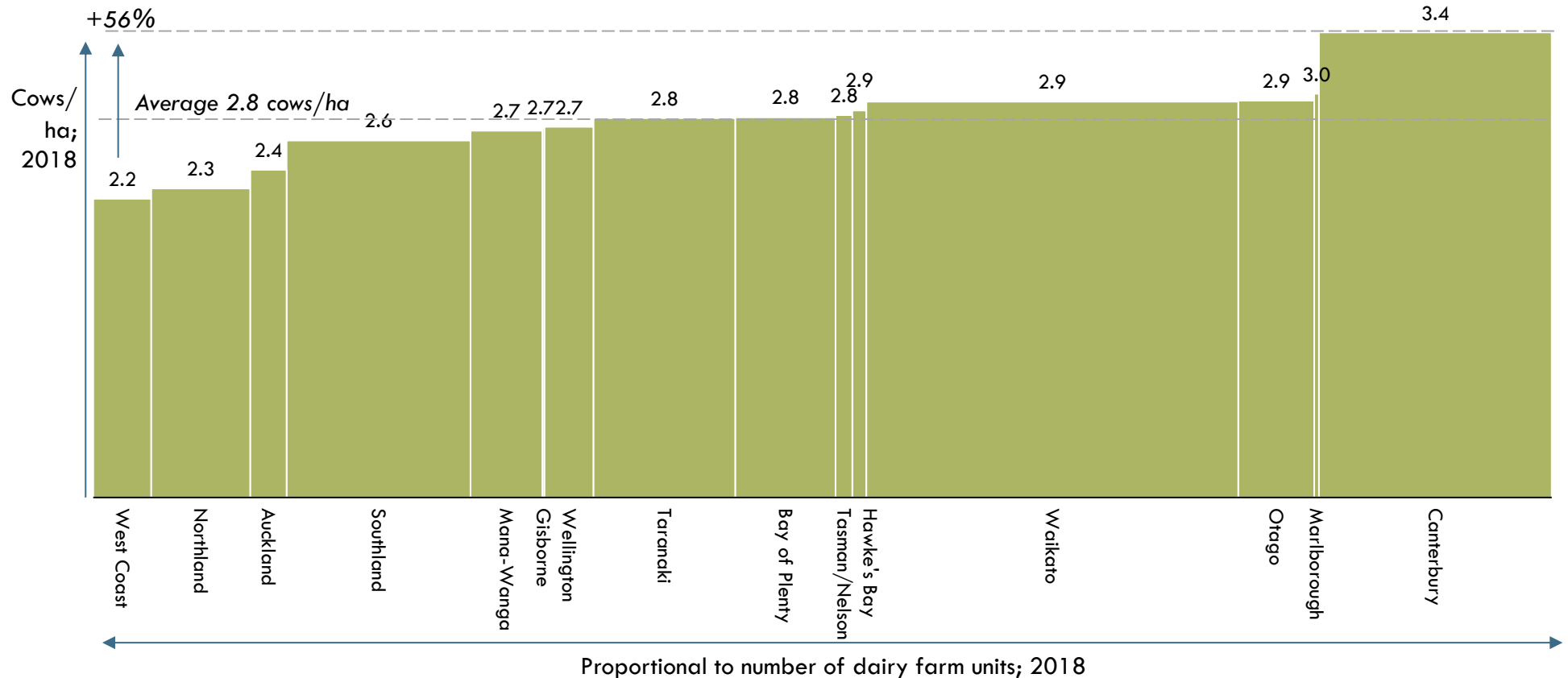


\*Manawatu-Wanganui; Note: this suggests less competitive pressure on traditional regions towards consolidation (likely do to higher profitability and lower costs); Source: Statistics NZ; DairyNZ; Coriolis analysis

# Dairy cow density varies by region, with Canterbury having +56% more cows per hectare than the West Coast

## NUMBER OF DAIRY COWS/HECTARES VS DAIRY AREA

Ha; cows/ha; 2018

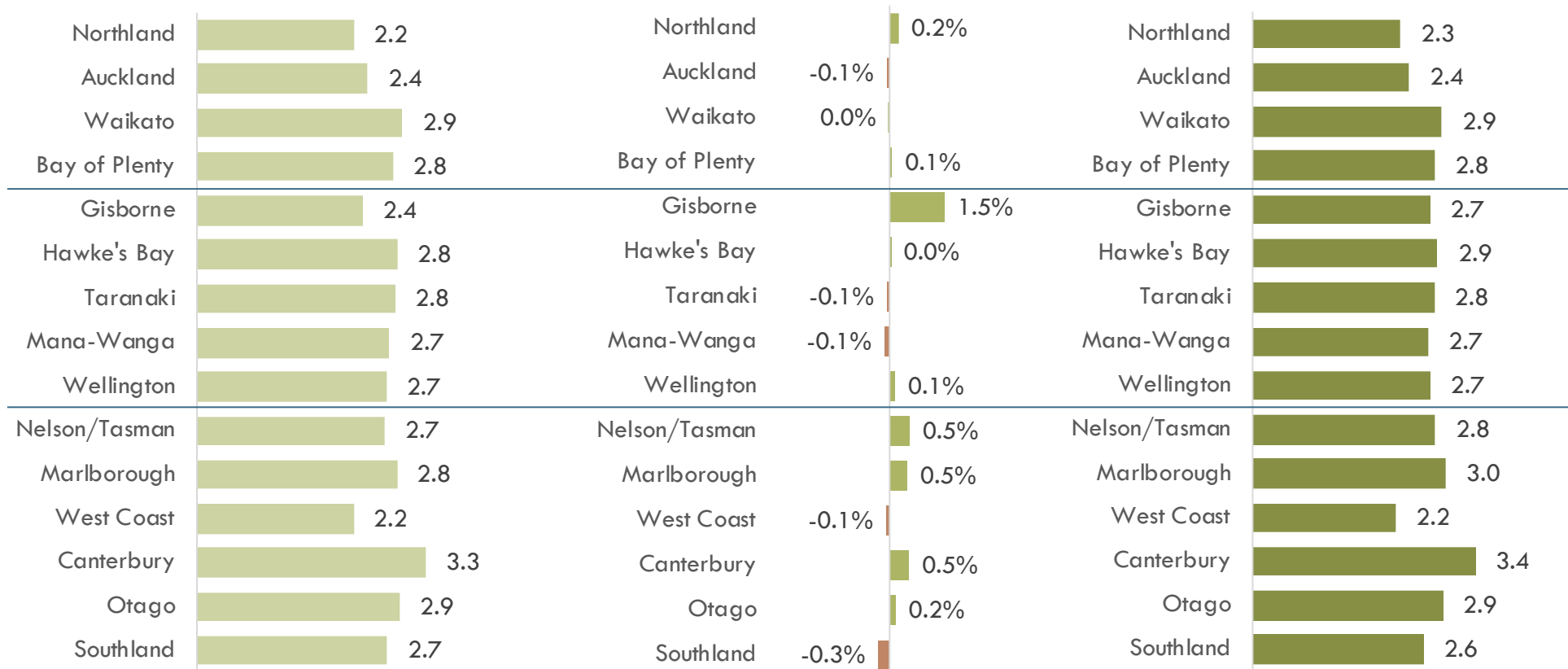


# While some regions are growing dairy cow densities per hectare, others are not

**DAIRY COWS/HA 2008**  
Animals/ha; 2008

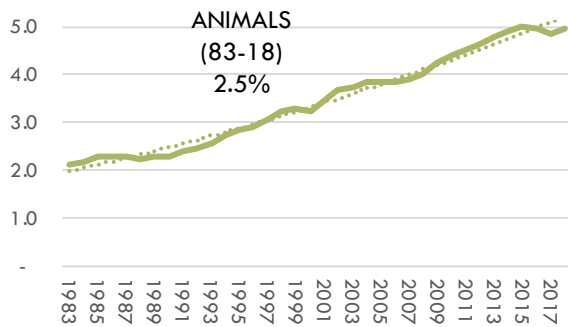
**10Y CAGR**  
%; 08vs18

**DAIRY COWS/HA 2018**  
Animals/ha; 2018

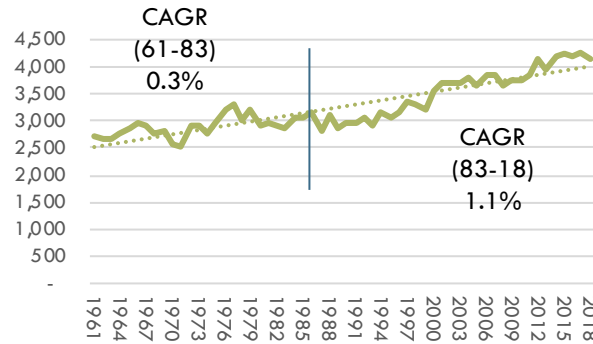


# There are more cows making more milk, but with fewer farmers, leading to relatively flat on-farm employment

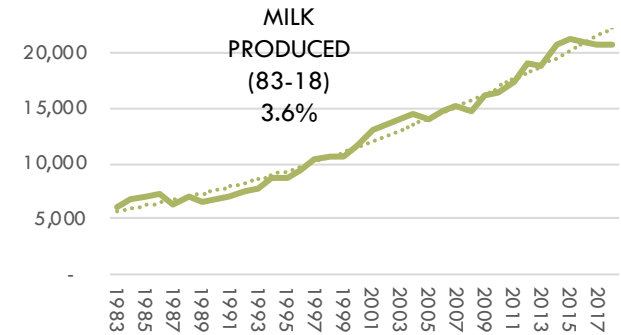
**DAIRY COWS**  
Animals; 1983-2018



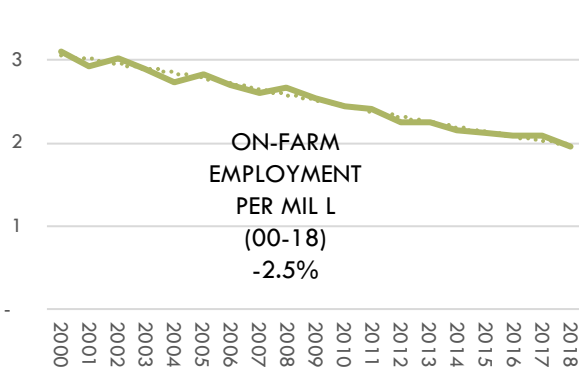
**AVERAGE MILK/COW**  
L/cow/year; 1961-2018



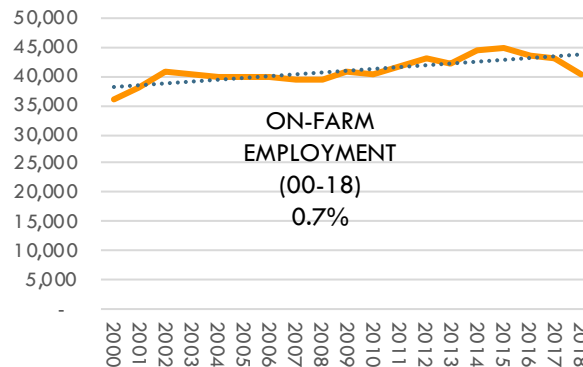
**NZ MILK PRODUCTION**  
L; m; 1983-2018



**ON-FARM EMPL./MIL LITRE**  
Headcount/l(m); 2000-2018



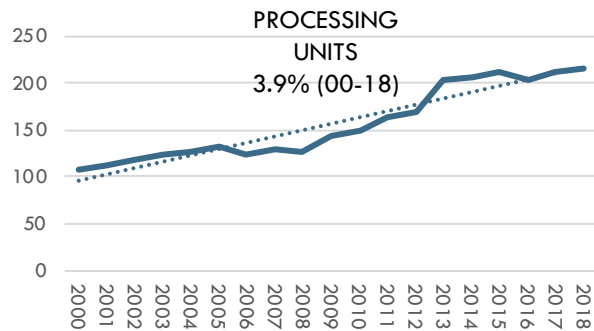
**TOTAL ON-FARM EMPL.**  
Headcount; 2000-2018



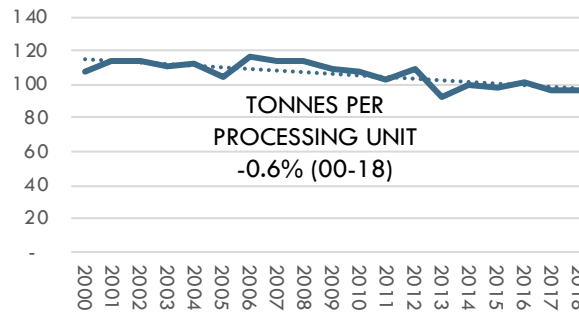


# Turning to processing, the sector is creating new firms and employment is growing

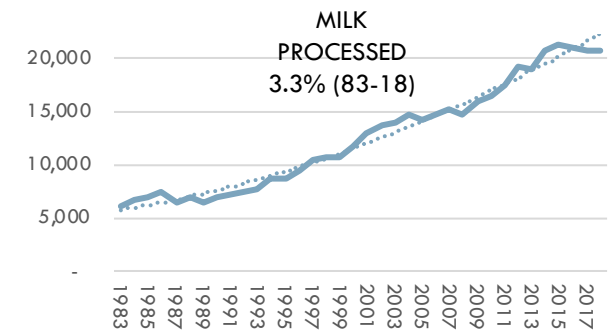
**DAIRY PROCESSING UNITS**  
Geographic units; 2000-2018



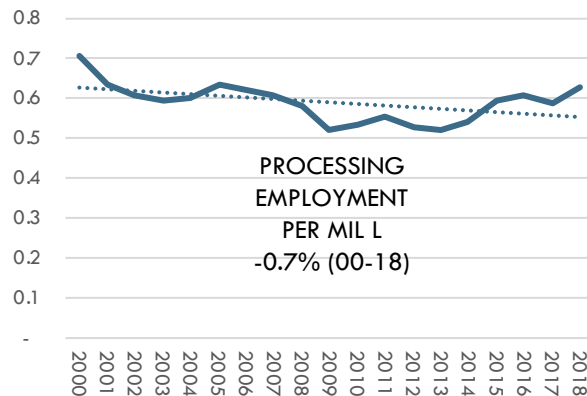
**VOLUME PER UNIT**  
Mil L/unit; 2000-2018



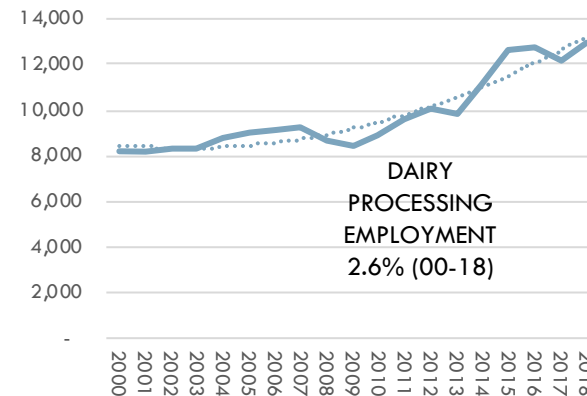
**NZ MILK PRODUCTION**  
L; m; 1983-2018



**PROC. EMPL./MIL LITRE**  
Headcount/mil l; 2000-2018



**PROC. EMPLOYMENT**  
Headcount; 2000-2018

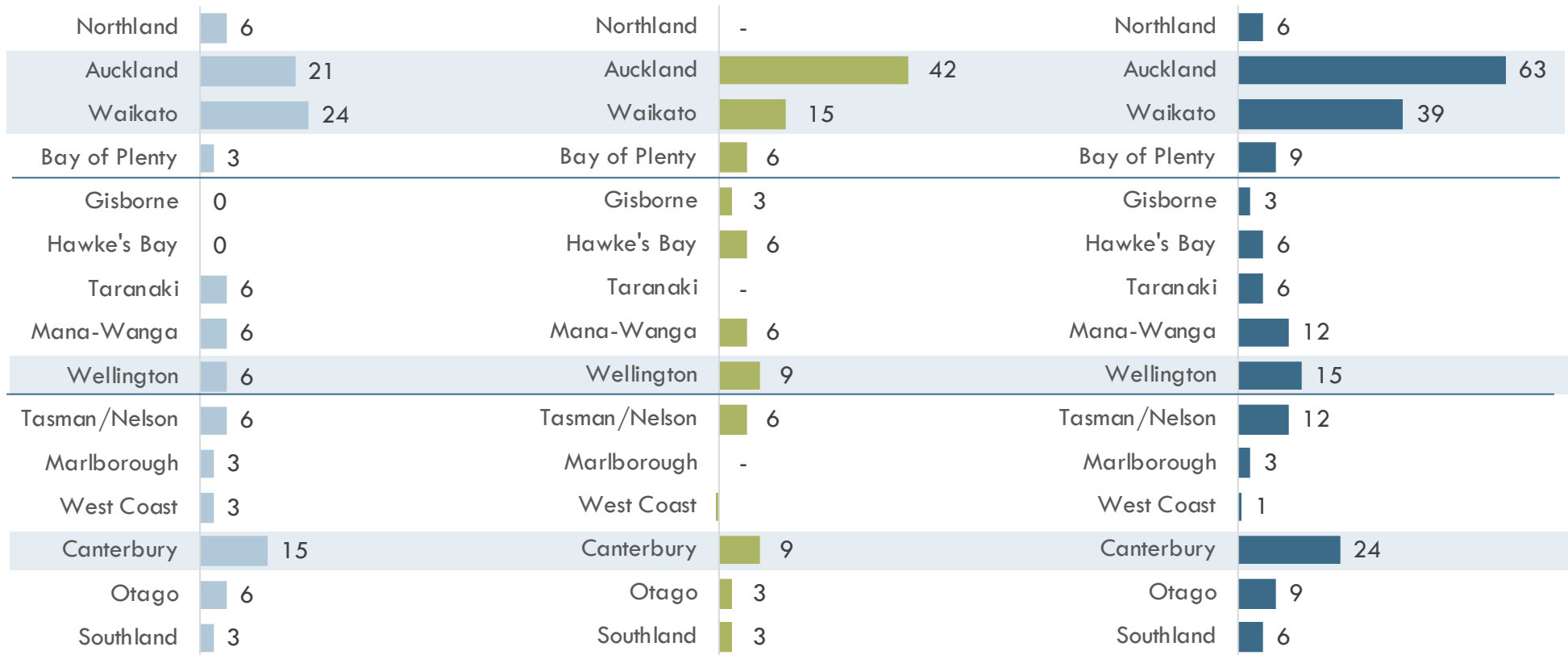


# Some regions of New Zealand are creating net new dairy processing units, while others are not

**UNIT COUNT IN 2000**  
Geographic units; 2000

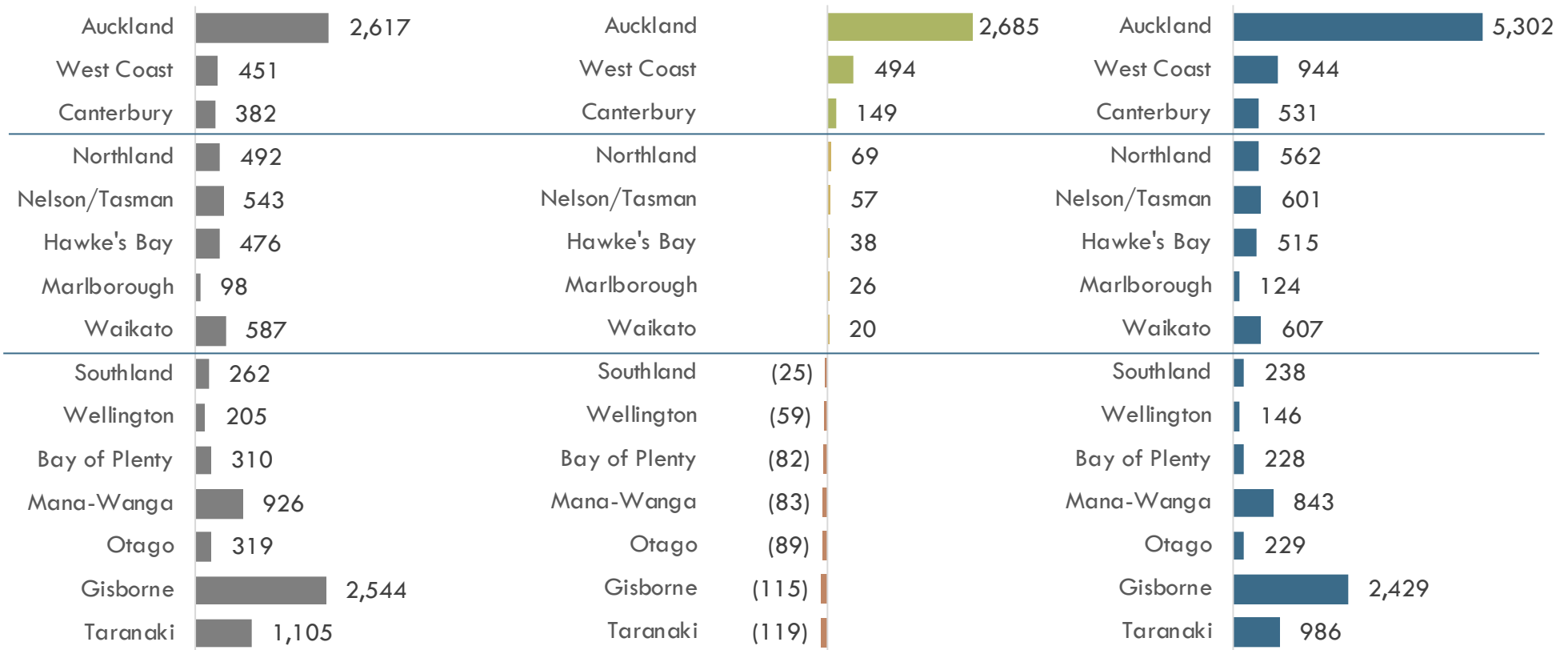
**UNIT GROWTH**  
Geographic units; 00vs18

**UNIT COUNT IN 2018**  
Geographic units; 2018



# Auckland, West Coast & Canterbury have created significantly more jobs from their milk over the last decade

**JOBS/BIL L OF MILK IN 2008**    **10Y CHANGE JOBS/BIL L**    **JOBS/BIL L OF MILK IN 2018**  
*Headcount/bil l; 2008*                      *Headcount/bil l; 08vs18*                      *Headcount/bil l; 2018*



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# *SUMMARY FINDINGS: The New Zealand red meat industry has not been creating employment*

## **PRODUCTION**

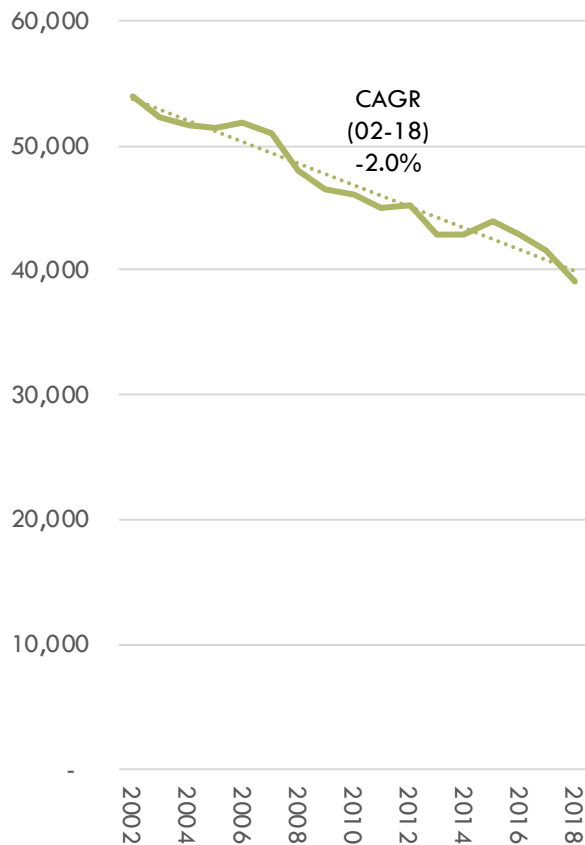
- New Zealand has falling livestock farm area driven by a long term trend to fewer, larger farms and less land overall
- All regions of New Zealand are experiencing falling 'meat-producing' farm numbers
- As a result of less land and fewer animals per hectare, New Zealand has falling annual livestock head produced
- As a result of flat meat production and falling jobs per tonne, on-farm jobs in 'meat producing farms' are falling
- On-farm jobs losses are coming from non-dairy livestock and exiting owner-operators
- 'Meat producing' farms are not creating major on-farm employment growth in any region

## **PROCESSING**

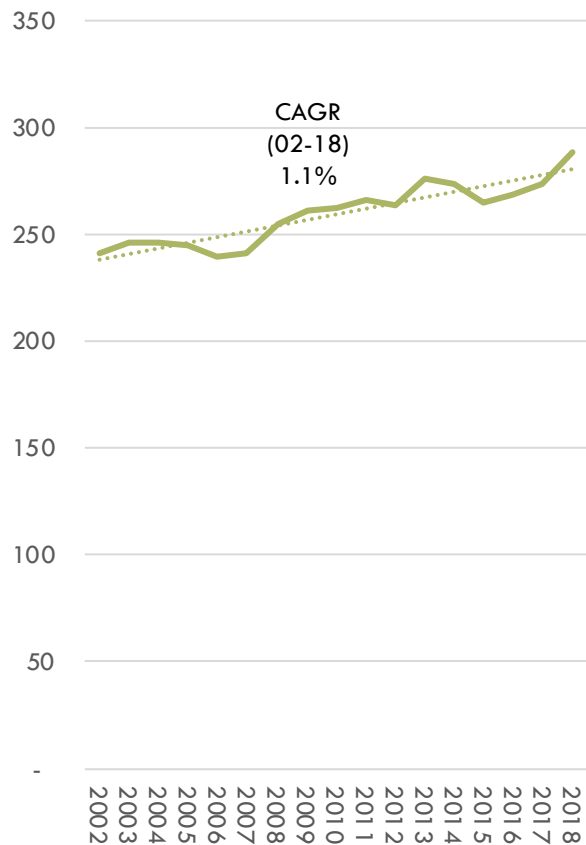
- Overall, meat processing operational units are growing modestly (0.5% CAGR) and operations are spread across New Zealand
- Some regions are creating new meat processing operational units, while others are shrinking
- Meat processing has flat employment per tonne of meat and employment is relatively flat
- Meat processing supports a large number of jobs across all regions of the country
- About half of regions are creating significant new meat processing employment, the other half are shrinking

# New Zealand has falling livestock farm area driven by less land overall and a long term trend to fewer, larger farms

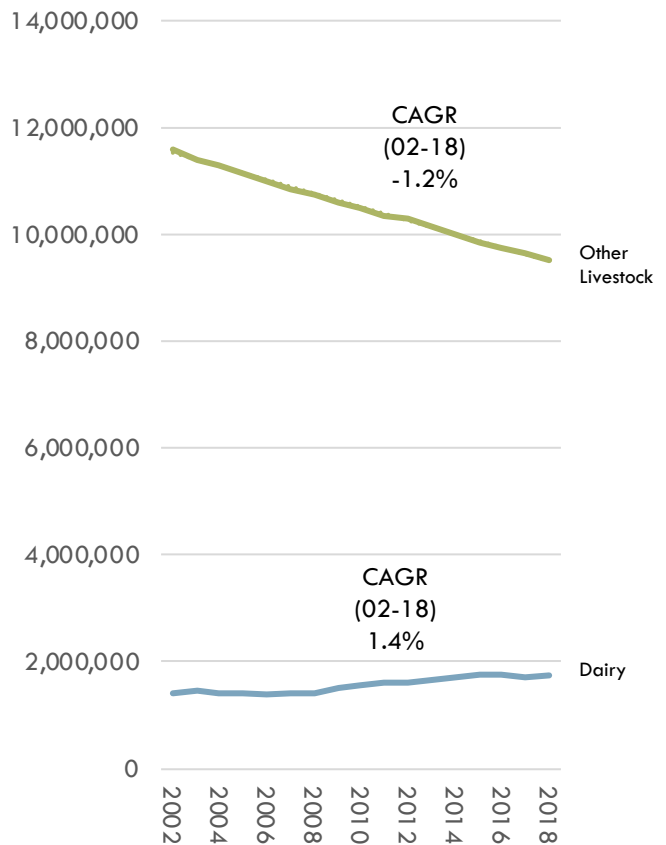
**# OF LIVESTOCK FARMS**  
Units; 2002-2018



**AVERAGE FARM SIZE**  
Ha/unit; 2002-2018



**HECTARES**  
Ha; 2002-2018



Source: Statistics NZ; MAF/MPI; Coriolis analysis

# All regions of New Zealand are experiencing falling ‘meat-producing’ farm numbers

## MEAT FARMS 2003

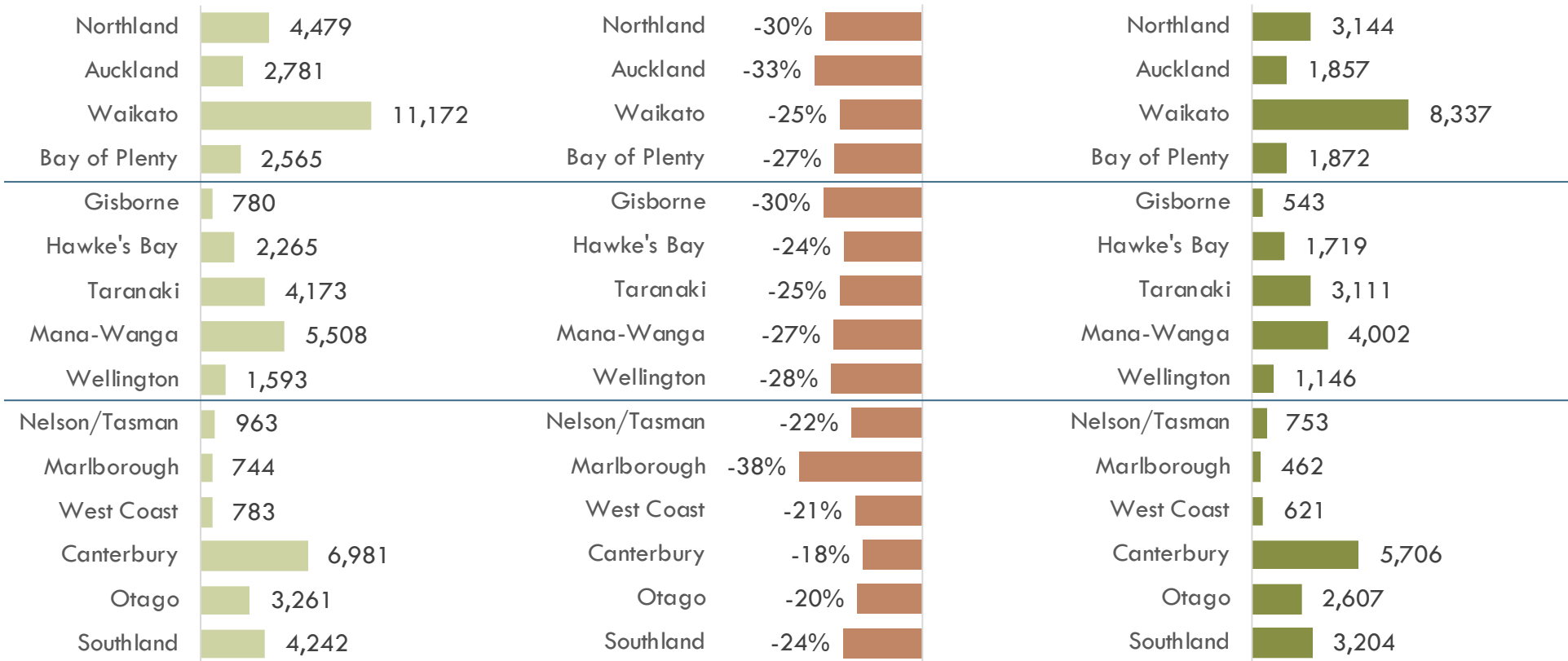
Units; 2003

## 15Y % CHANGE

% of units; 03vs18

## MEAT FARMS 2018

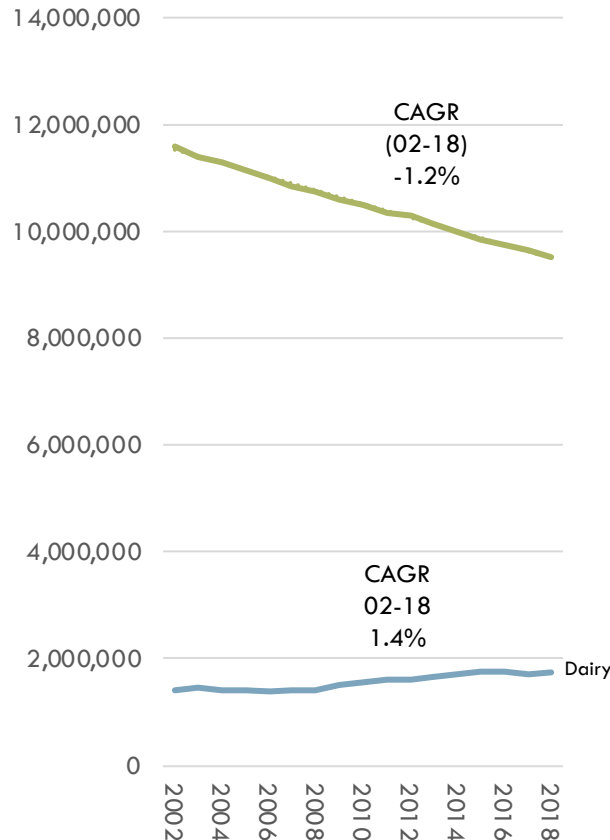
Units; 2018



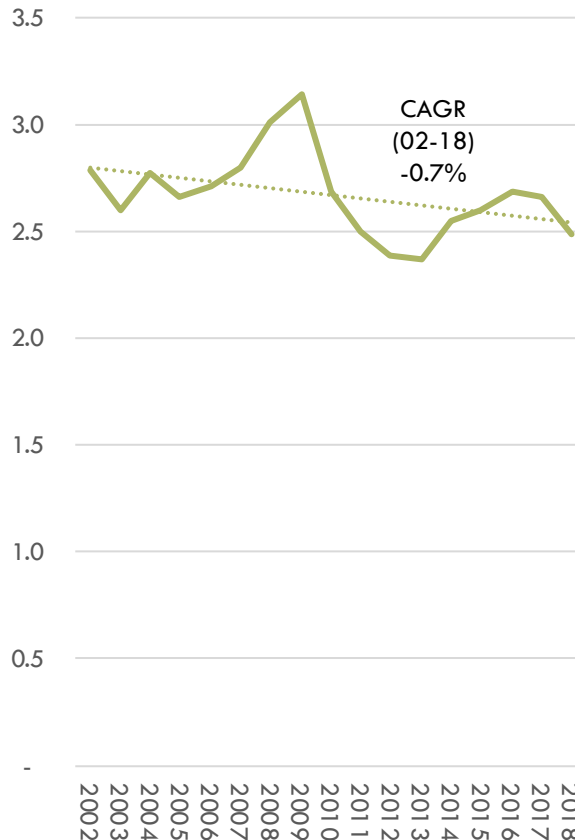
Note: Total includes dairy farms as these produce significant amounts of cattle; Source: Statistics NZ; UN FAO; MAF/MPI; Coriolis analysis

# As a result of less land and fewer animals per hectare, New Zealand has falling annual livestock head produced

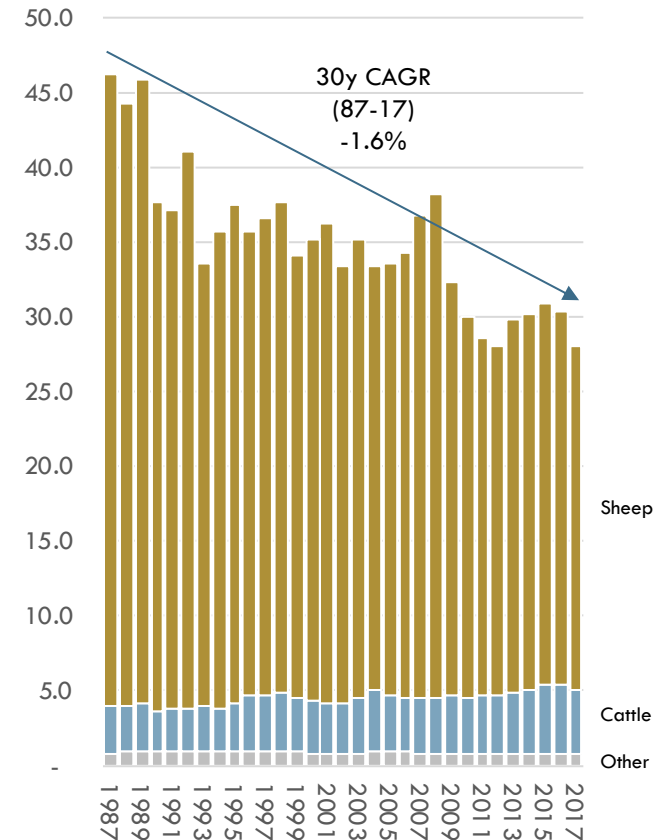
**HECTARES**  
Ha; 2002-2018



**ANIMALS PER HECTARE**  
Processed head/ha; 2002-2018



**HEAD PRODUCED**  
Head; 1987-2017

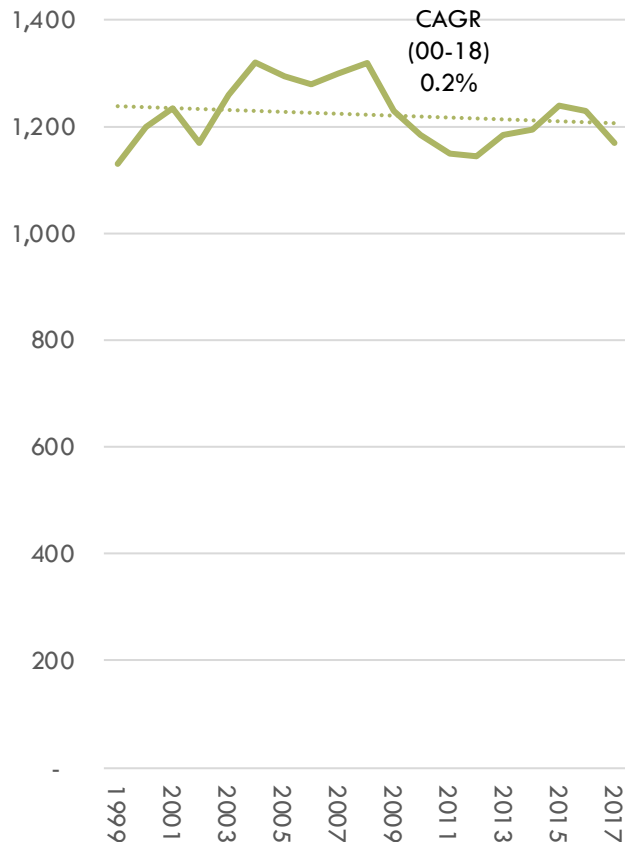


Source: Statistics NZ; MAF/MPI; Coriolis analysis

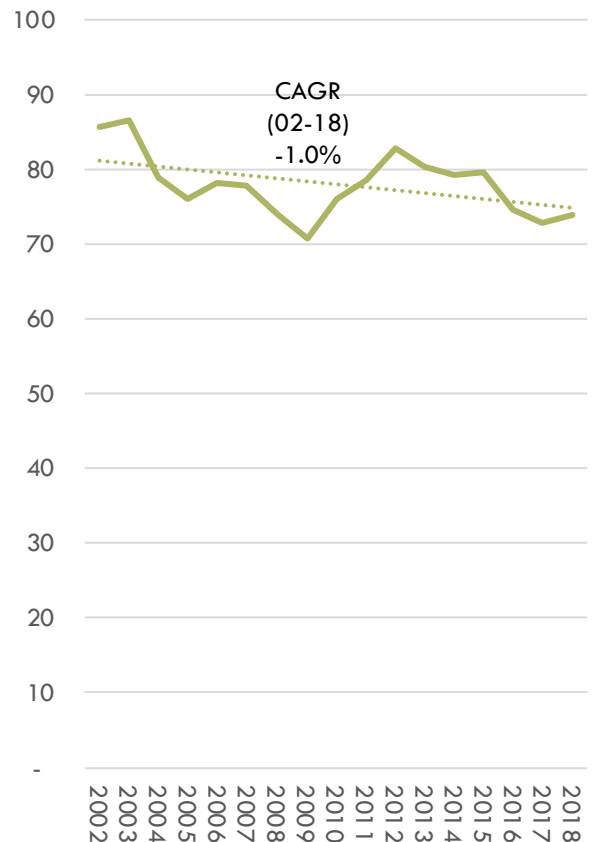


# As a result of flat meat production and falling jobs per tonne, on-farm jobs in 'meat producing farms' are falling

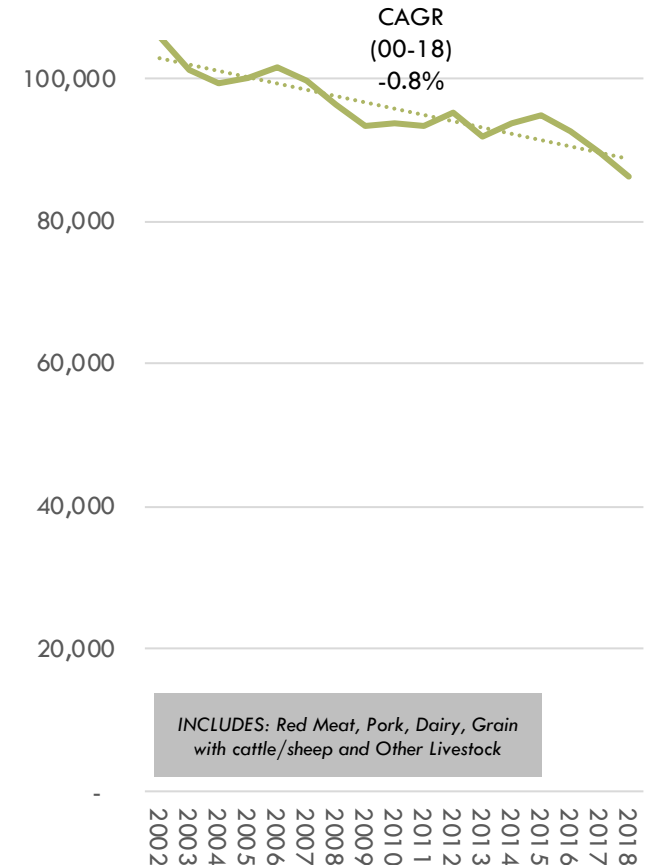
**MEAT PRODUCED\***  
T; 000; 1999-2017



**ON-FARM JOBS/TONNE\*\*\***  
Headcount/t; 000; 00-18



**ON-FARM JOBS**  
Headcount\*\*, 2002-2018

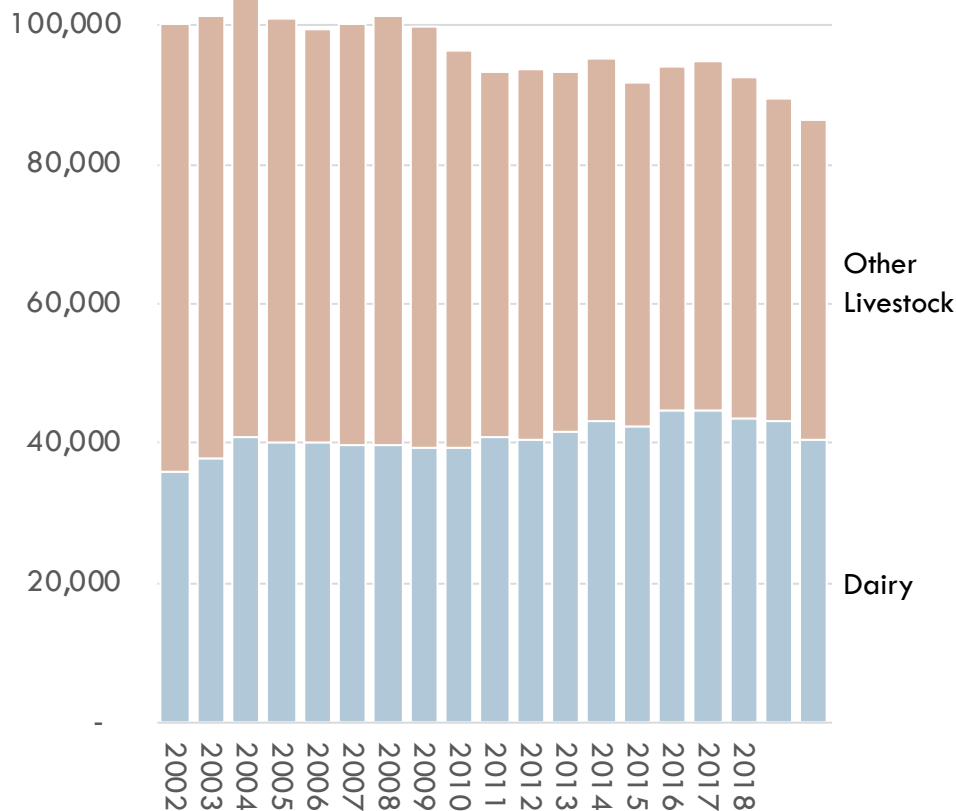


INCLUDES: Red Meat, Pork, Dairy, Grain with cattle/sheep and Other Livestock

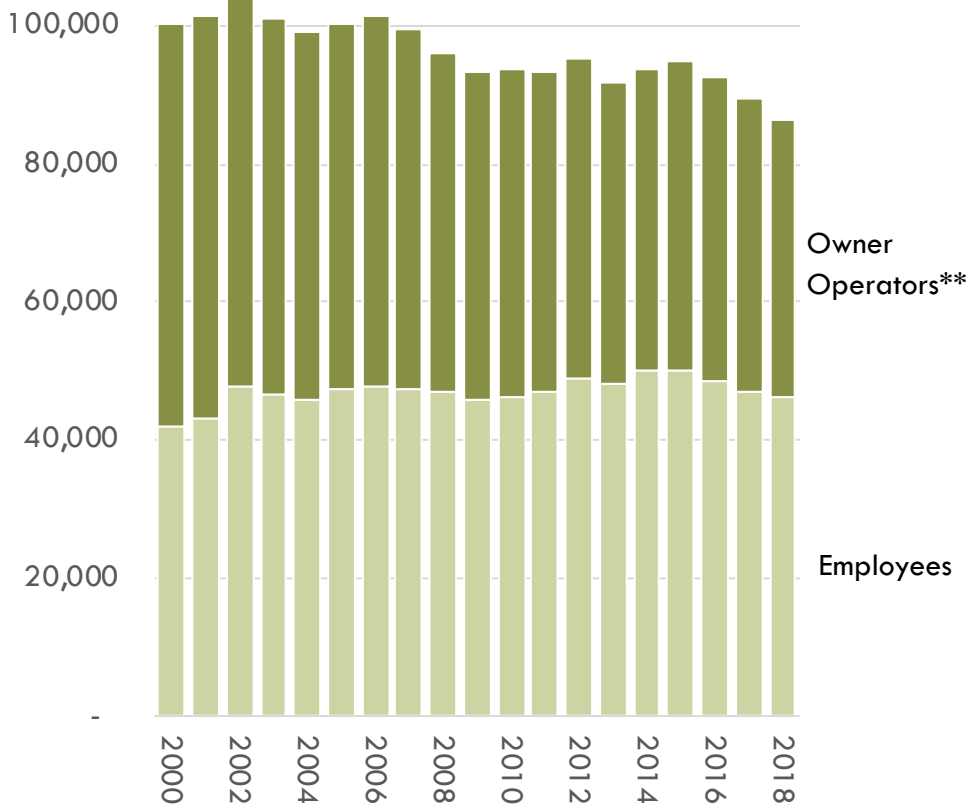
\*Red meat and pork, excluding poultry and seafood; \*\*Including owner-operators (i.e. non-PAYE); \*\*\*Calculation is jobs per previous, trailing year volume (for data related reasons); Source: Statistics NZ; Coriolis analysis and estimates

# On-farm job losses are coming from non-dairy livestock and exiting owner-operators

**ON-FARM JOBS: DAIRY & ALL OTHER\***  
Headcount; 2002-2018



**ON-FARM JOBS\*\*: OWNERS & EMP.**  
Headcount; 2002-2018



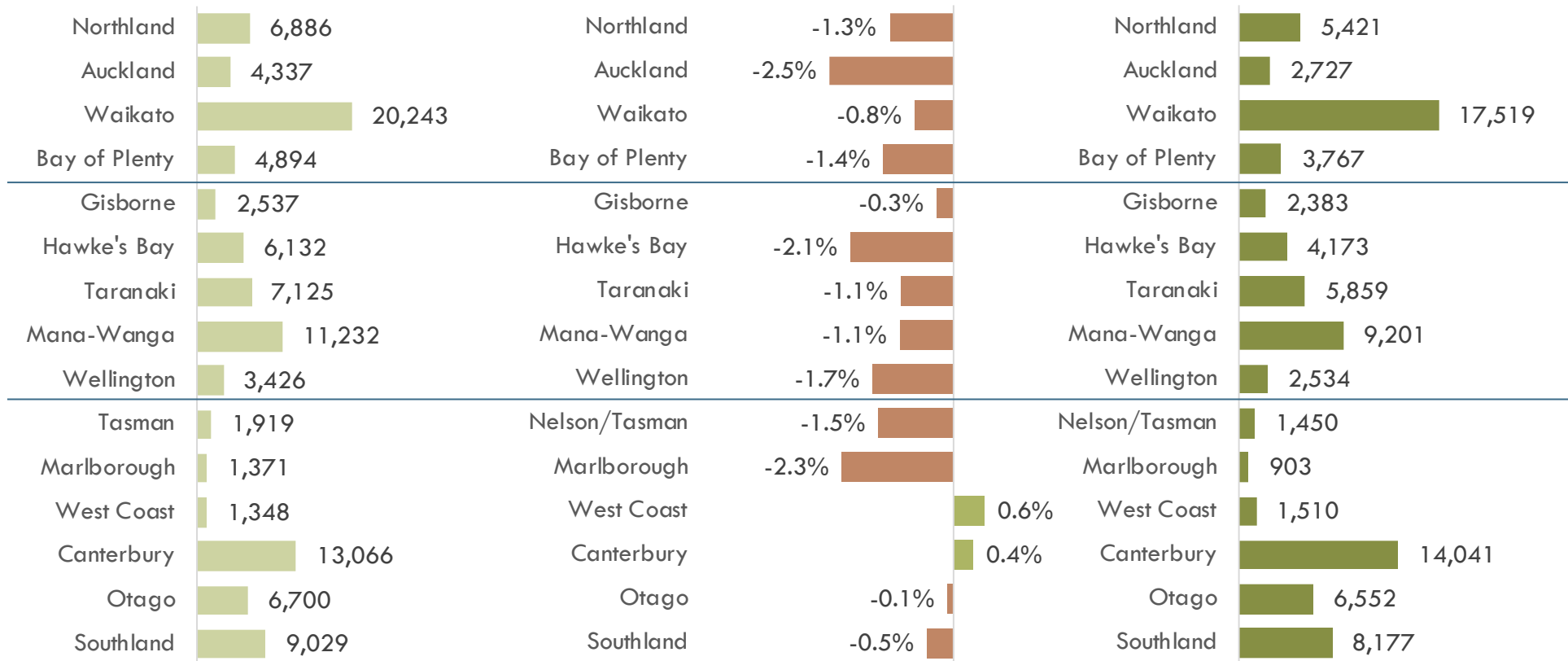
\*Red meat and pork livestock, excluding poultry and seafood; \*\*Including assumed owner-operators (i.e. non-PAYE) at one per farm; Source: Statistics NZ; Coriolis analysis and estimates

# 'Meat producing' farms are not creating major on-farm employment growth in any region

**ON-FARM EMPLOYMENT 2000**  
Headcount; 2000

**18Y CAGR**  
% head; 00vs18

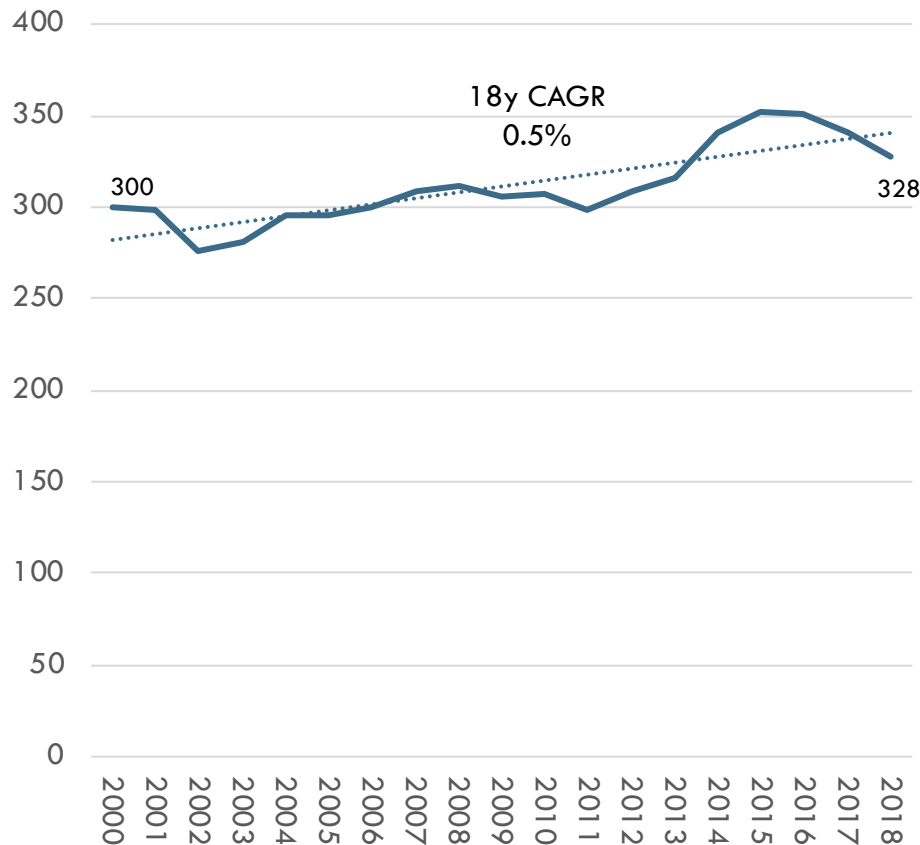
**ON-FARM EMPLOYMENT 2018**  
Headcount; 2018



# Turning to processing, meat processing units are growing modestly (0.5% CAGR) and operations are spread across NZ

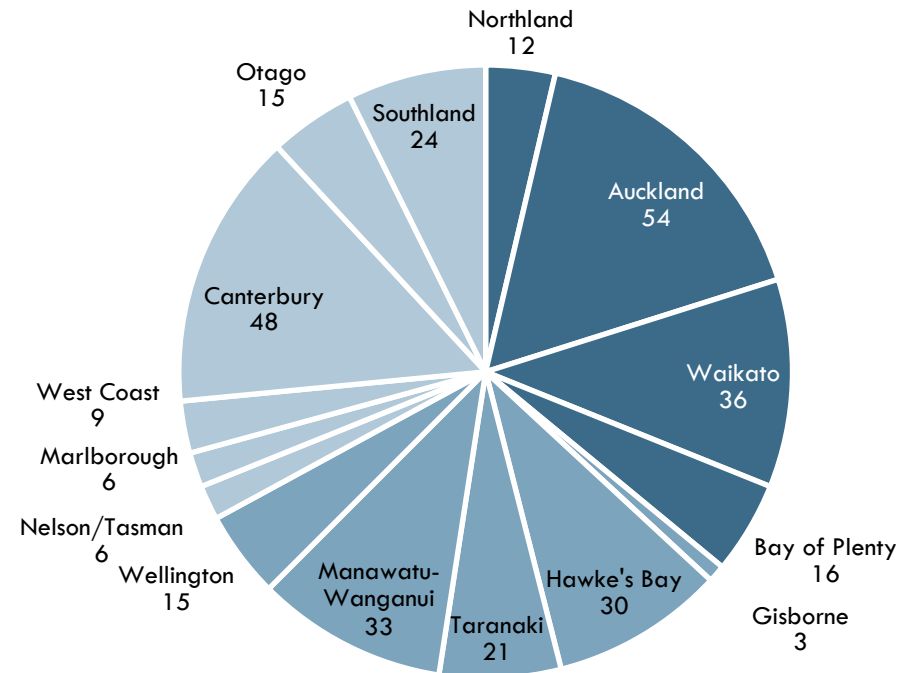
## MEAT PROCESSING OPERATIONS

Geographic units; 2000-2018



## MEAT PROCESSING OPS BY REGION

Geographic units; 2018



TOTAL = 328 meat processing operational units

# Some regions are creating new meat processing operational units, while others are shrinking

## UNIT COUNT IN 2000

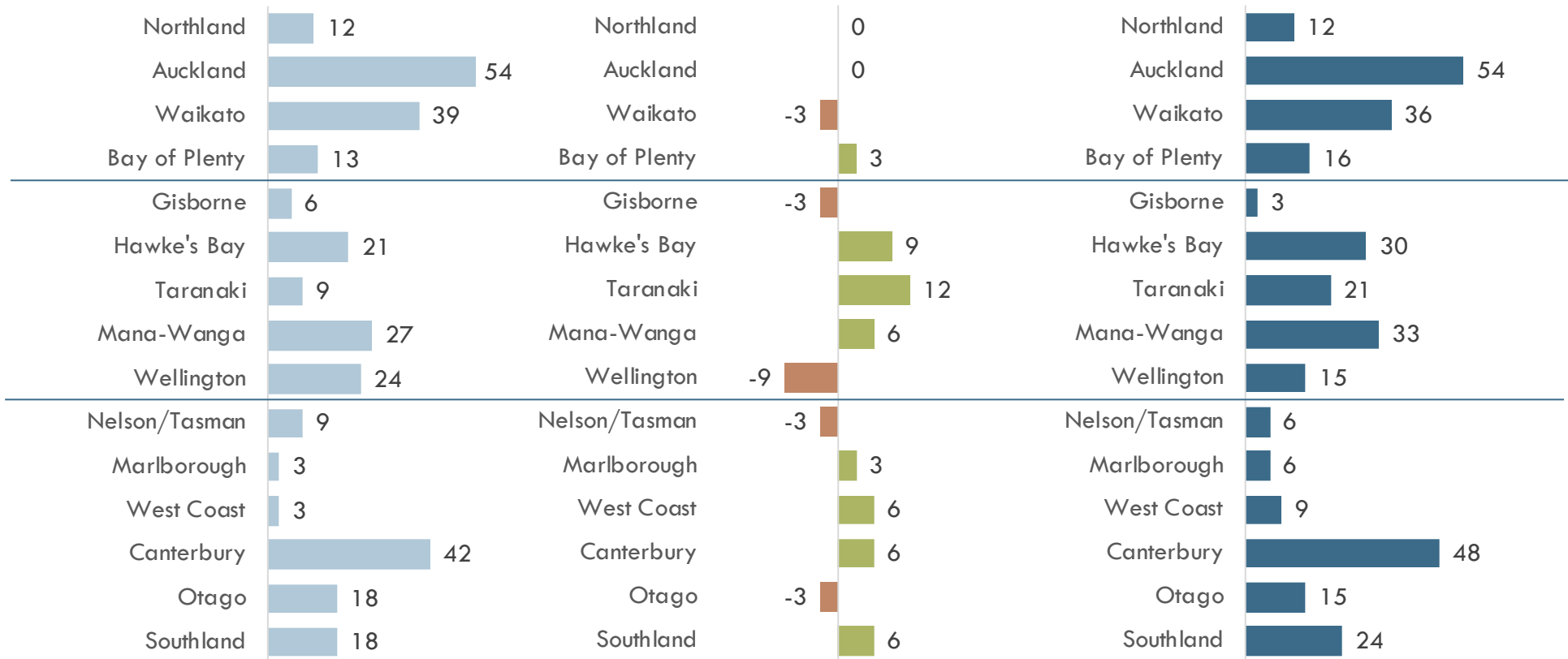
Geographic units; 2000

## NET NEW UNITS ADDED

Geographic units; 00vs18

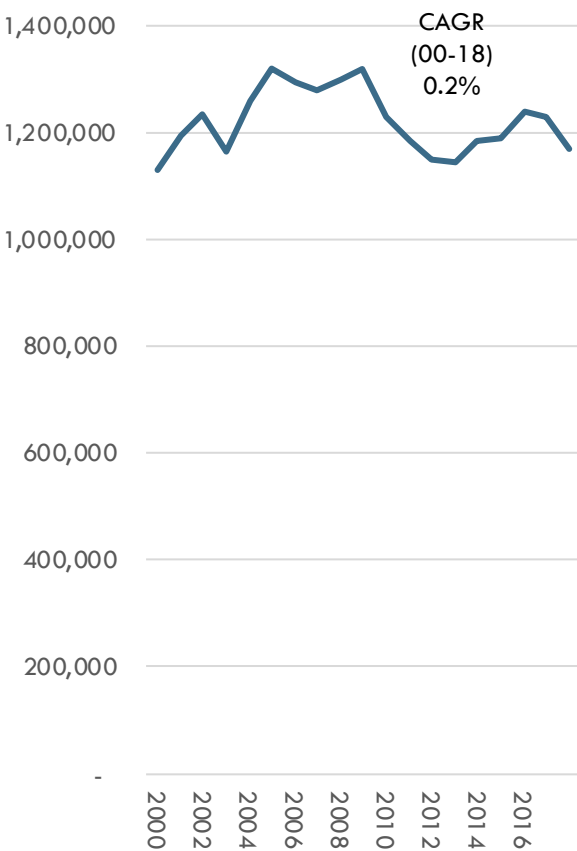
## UNIT COUNT IN 2018

Geographic units; 2018

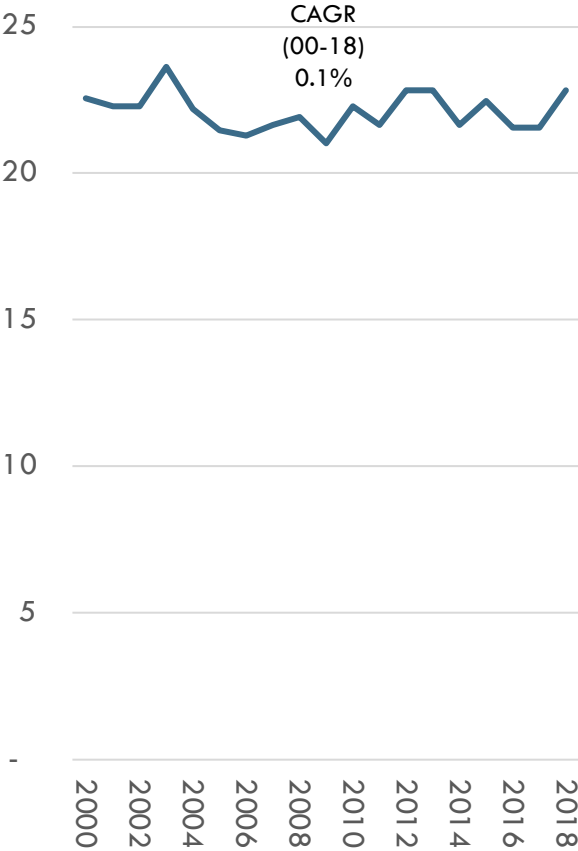


# Meat processing has flat employment per tonne of meat and total meat employment is relatively flat

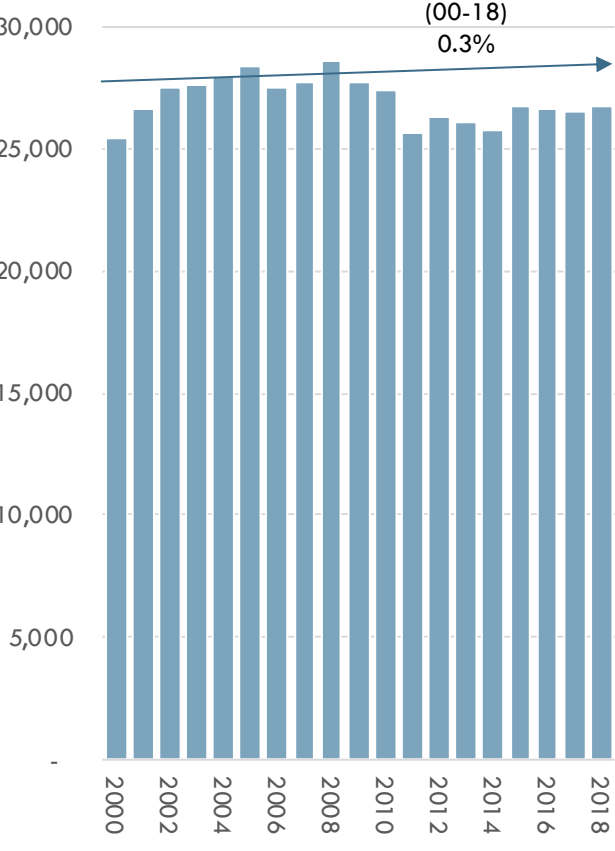
**TONNES PROCESSED**  
T; 2000-2018



**PROC. EMPL./TONNE**  
Headcount/1,000t; 2000-2018



**PROCESSING EMPL.**  
Headcount; Geog; 2000-2018

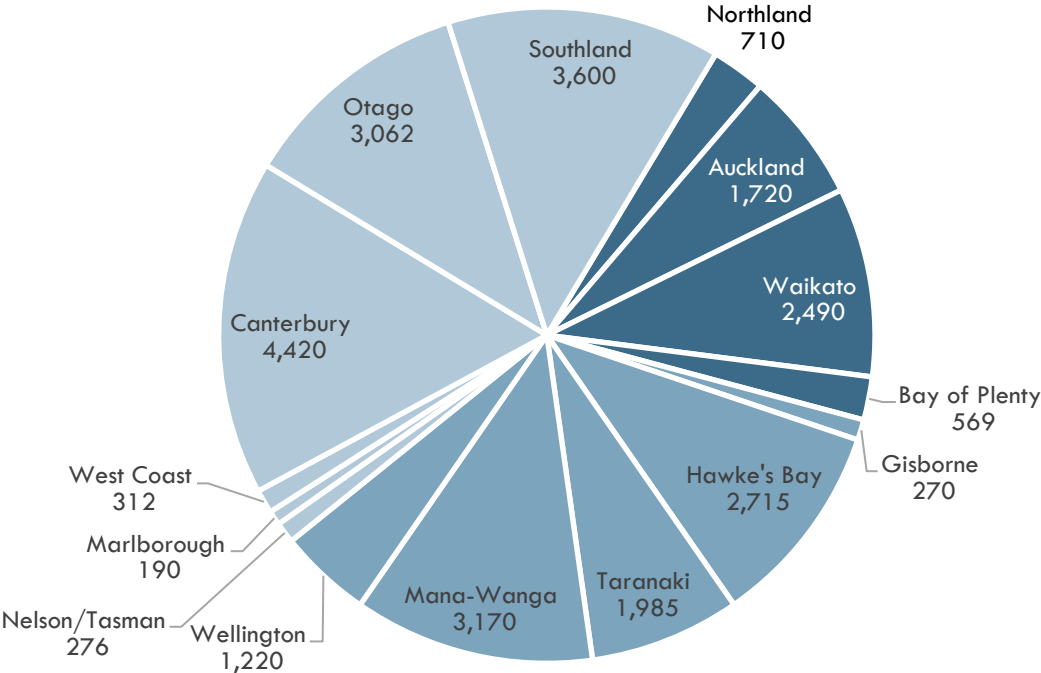


Note: Employment per tonne uses current year employment over previous year tonnage for data driven reasons; Source: Statistics NZ; UN FAO; MAF/MPI; Coriolis analysis

# Meat processing supports a large number of jobs across all regions of the country

## MEAT PROCESSING EMPLOYMENT BY REGION

Headcount; 2018



TOTAL = 26,709 meat processing employees

# About half of regions are creating significant new meat processing employment, the other half are shrinking

## EMPLOYMENT 2000

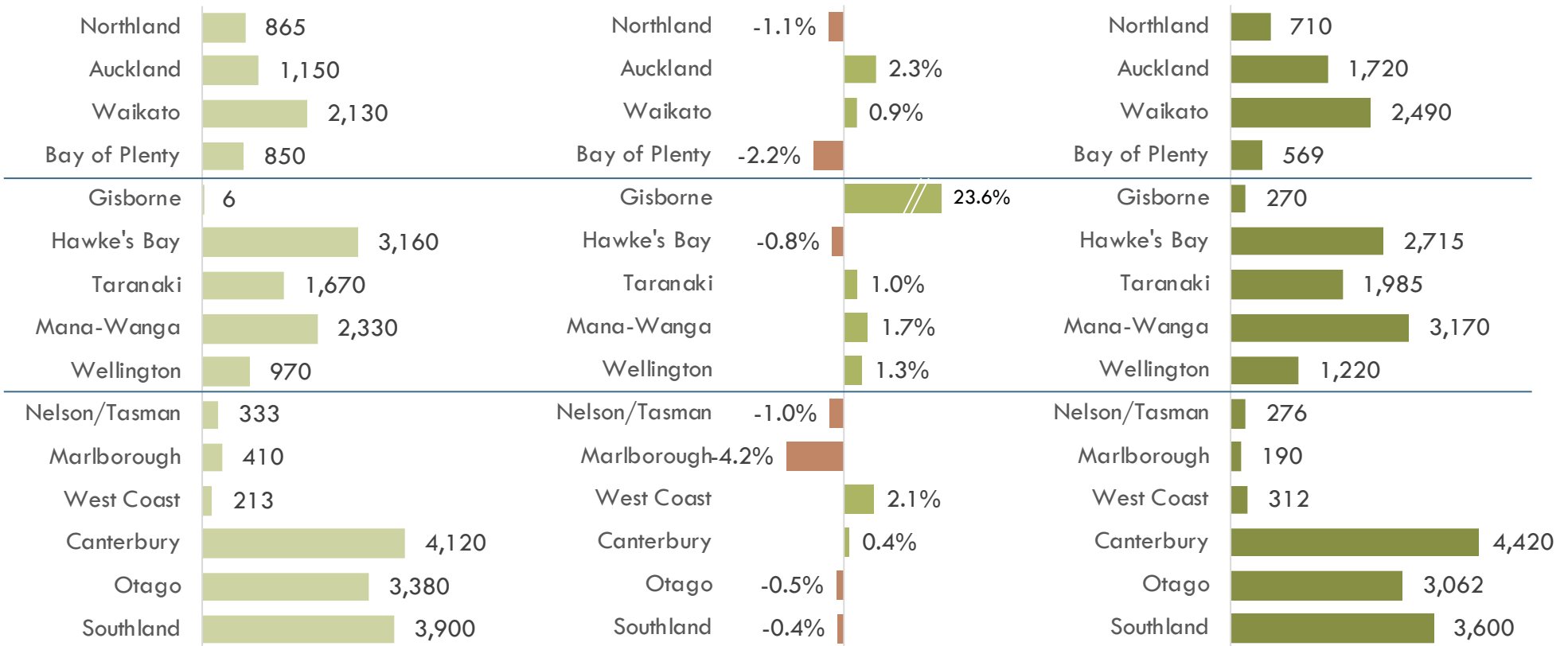
Headcount; 2000

## 18Y CAGR

% head; 00vs18

## EMPLOYMENT 2018

Headcount; 2018





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# *SUMMARY FINDINGS: The New Zealand poultry industry has been creating employment*

## **PRODUCTION**

- Poultry meat farm units are clustered in the four key regions where the major processors have plants
- New Zealand is in a long term trend to larger poultry farms producing more birds per unit
- New Zealand is producing larger birds, more overall poultry meat and more on-farm employment in poultry
- Only two regions – Waikato and Taranaki – are creating major on-farm employment in poultry meat

## **PROCESSING**

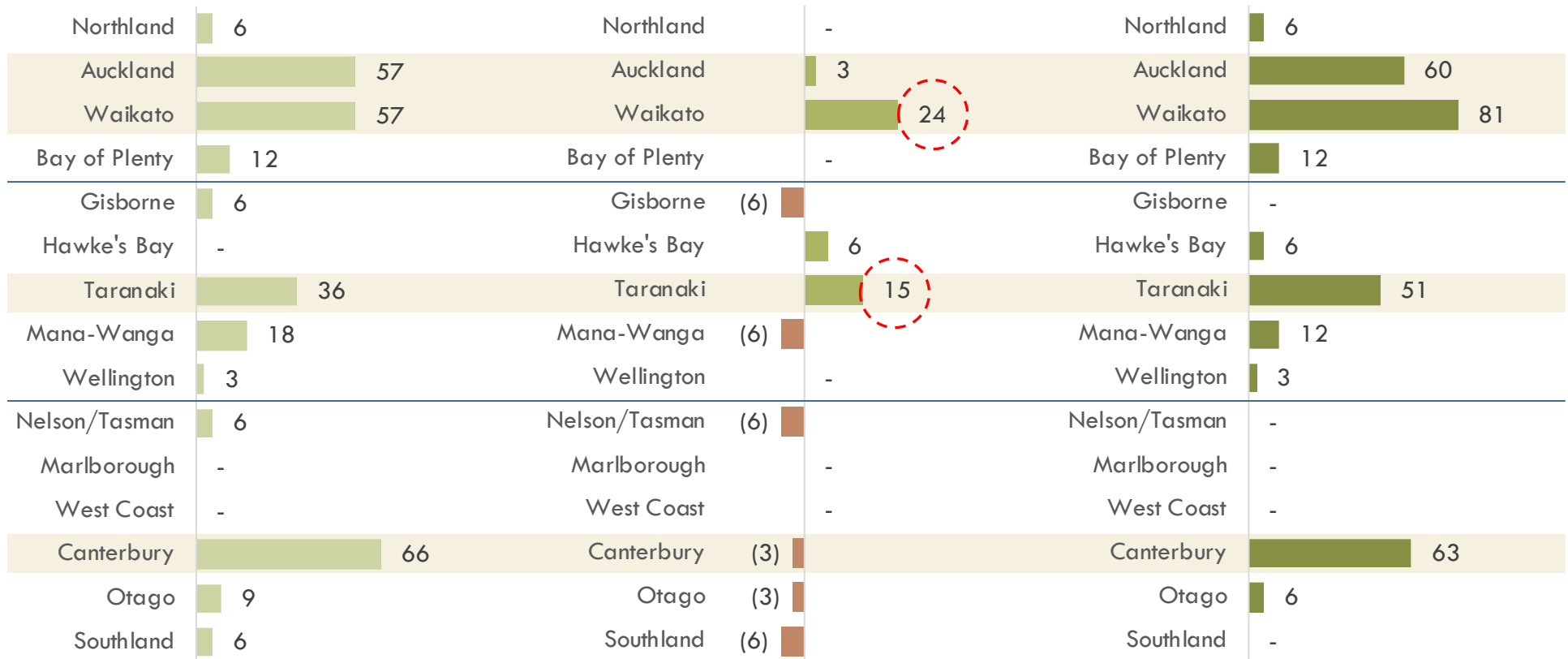
- Poultry processing is clustered in six regions
- Poultry processing has falling employment per tonne of meat throughput, but growing overall employment
- Auckland, Waikato, Taranaki and Canterbury created significant new poultry processing employment

# Poultry meat farm units are clustered in the four key regions where the major processors have plants

**MEAT POULTRY FARMS 2003**  
Units; 2003

**15Y CHANGE**  
Units; 03vs18

**MEAT POULTRY FARMS 2018**  
Units; 2018

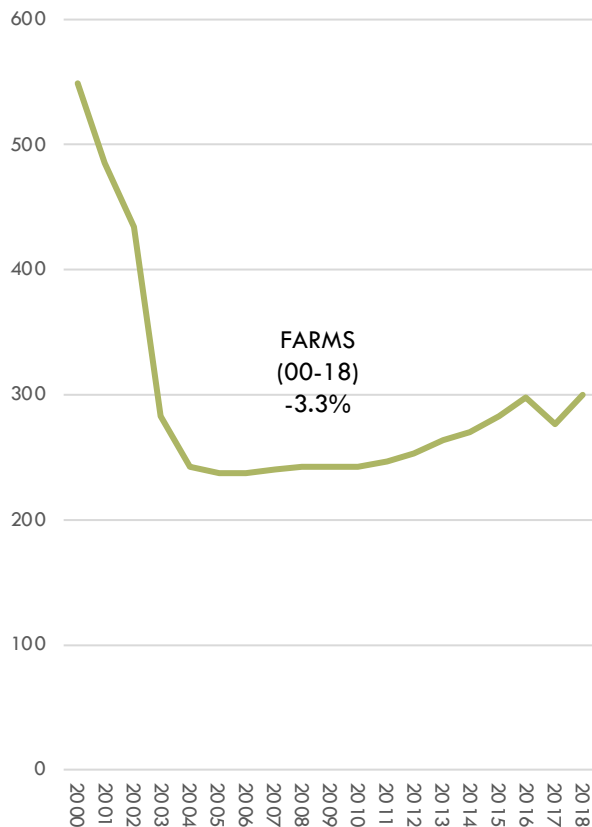


Note: data is 51%+ poultry farms; may exclude some units on diversified farms; Source: Statistics NZ; UN FAO; MAF/MPI; Coriolis analysis

# New Zealand is in a long term trend to larger poultry farms producing more birds per unit

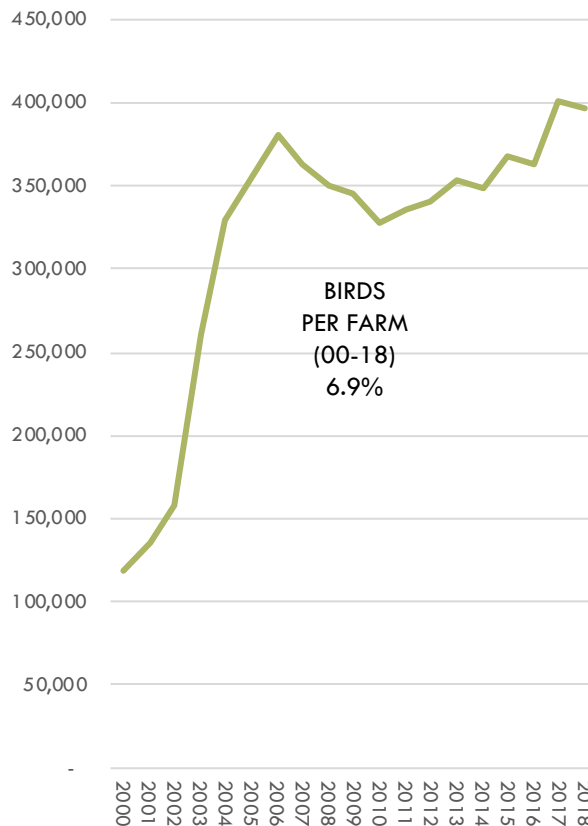
## POULTRY FARMS

Geographic unit; 2000-2018



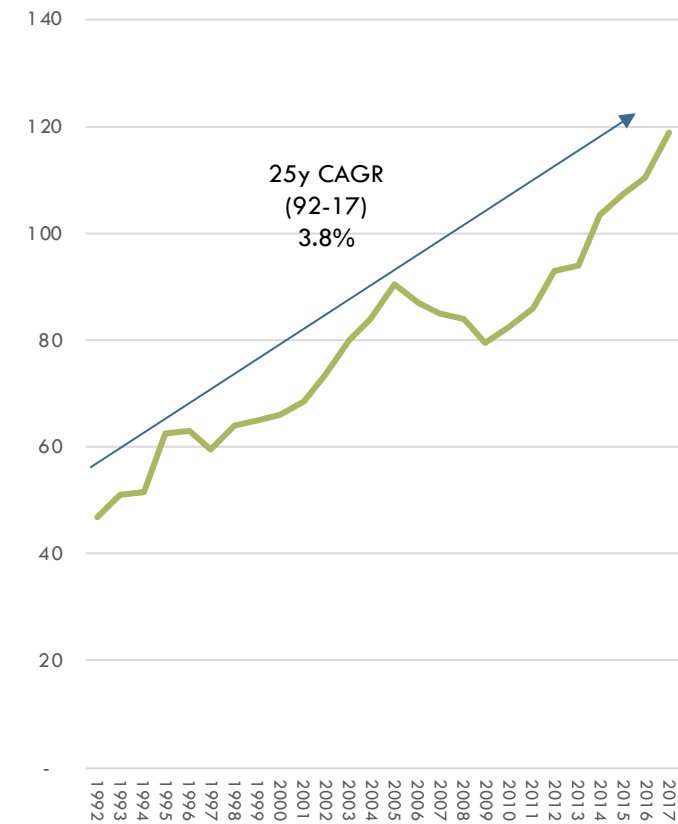
## BIRDS PER FARM

Annual birds/unit; 2000-2018



## ANNUAL BIRDS

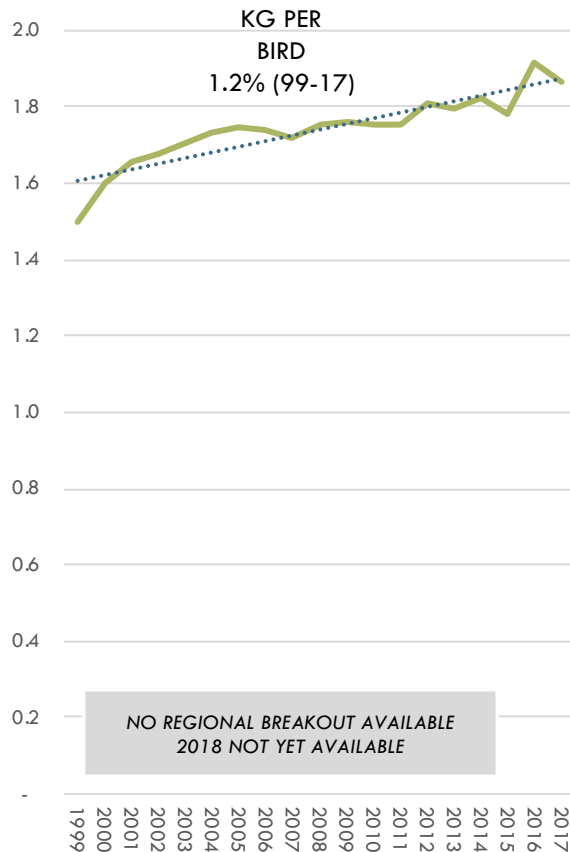
Head; 1992-2017



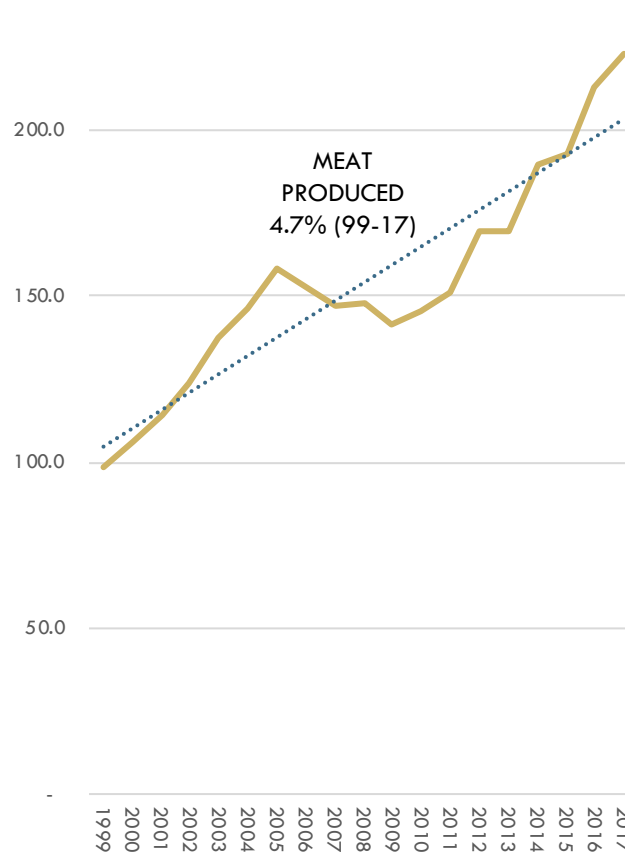
Note: calculation is previous year bird kill over current year farm unit numbers (for data reasons); Source: Statistics NZ; UN FAO; MAF/MPI; Coriolis analysis

# New Zealand is producing larger birds, more overall poultry meat, but fewer on-farm jobs per tonne

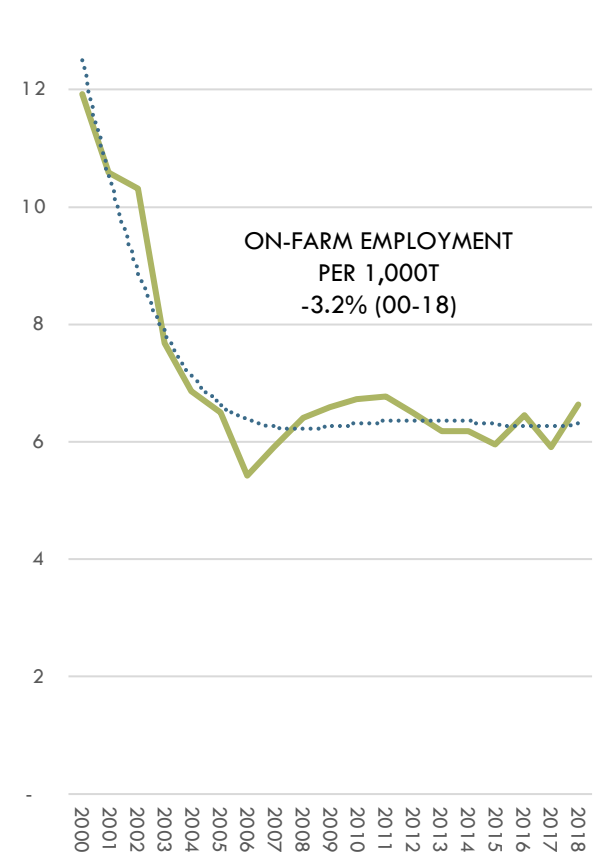
**AVERAGE KILL WEIGHT**  
Kg/bird; 1999-2017



**TOTAL MEAT PRODUCED**  
T; 1999-2017



**ON-FARM EMP./1,000 T**  
Headcount/1,000t; 2000-2018



Note: calculation is previous year bird kill over current year farm unit numbers (for data reasons); Source: Statistics NZ; UN FAO; MAF/MPI; Coriolis analysis

# Only two regions – Waikato and Taranaki – are creating major on-farm employment in poultry meat

**ON-FARM EMPLOYMENT 2003**  
Headcount; 2003

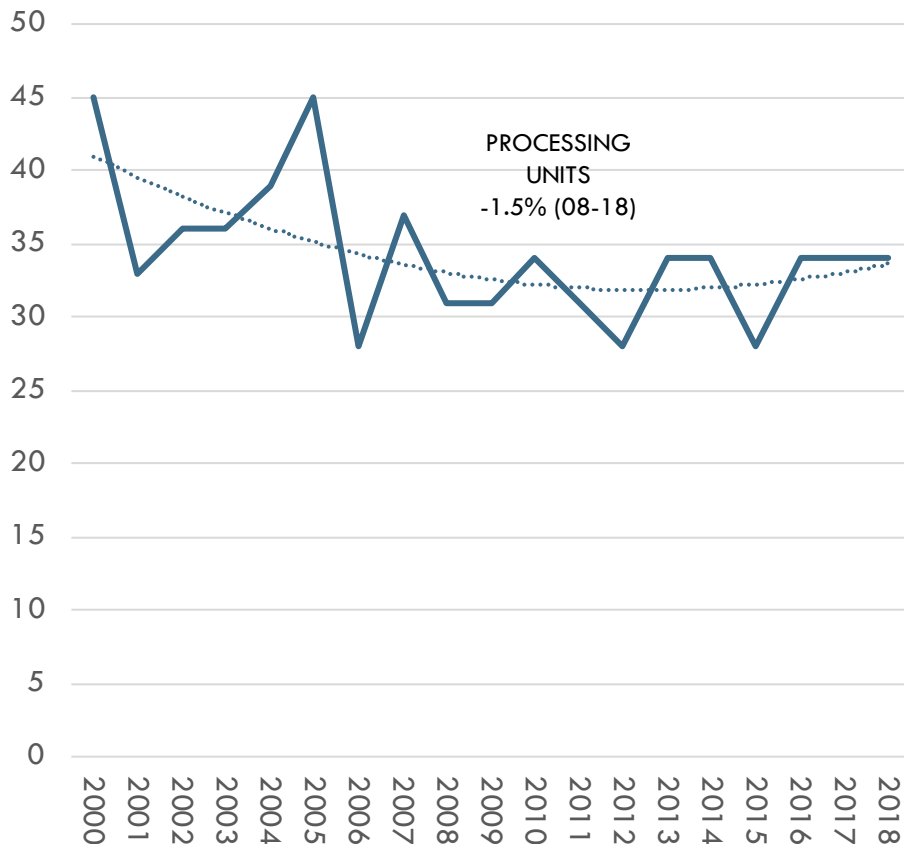
**15Y CHANGE**  
Headcount; 03vs18

**ON-FARM EMPLOYMENT 2018**  
Headcount; 2018

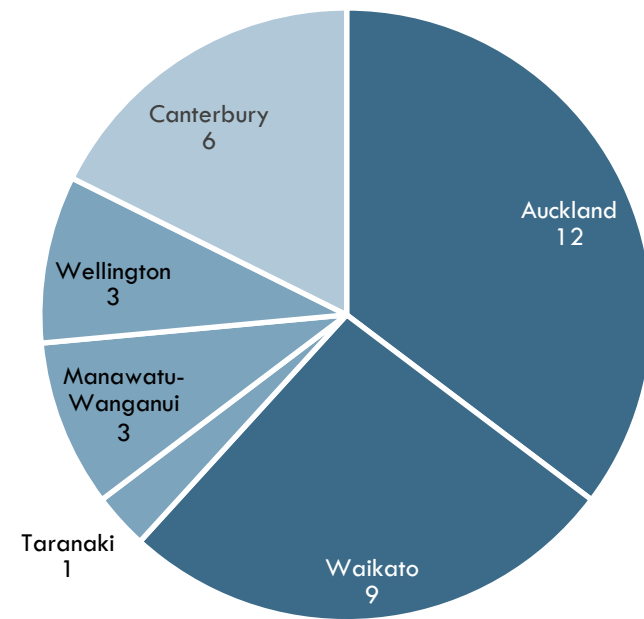
Region	2003 Headcount	15Y Change (%)	2018 Headcount
Northland	6	0.0%	6
Auckland	167	0.7%	190
Waikato	317	3.6%	601
Bay of Plenty	12	7.2%	42
Gisborne	12	-100%	-
Hawke's Bay	-	0.0%	56
Taranaki	186	2.9%	311
Mana-Wanga	36	1.5%	47
Wellington	18	-3.8%	9
Nelson/Tasman	6	-100%	-
Marlborough	-	-	-
West Coast	-	-	-
Canterbury	186	0.5%	203
Otago	9	1.6%	12
Southland	12	-100%	-

# Turning to processing, the sector is clustered in six regions

**POULTRY MEAT PROCESSING OPERATIONS**  
Geographic units; 2000-2018



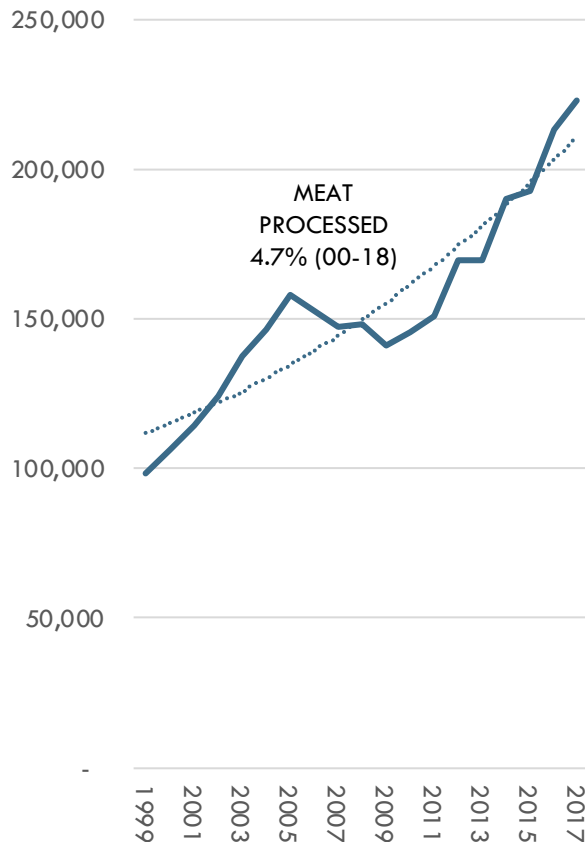
**POULTRY PROCESSING OPS BY REGION**  
Geographic units; 2018



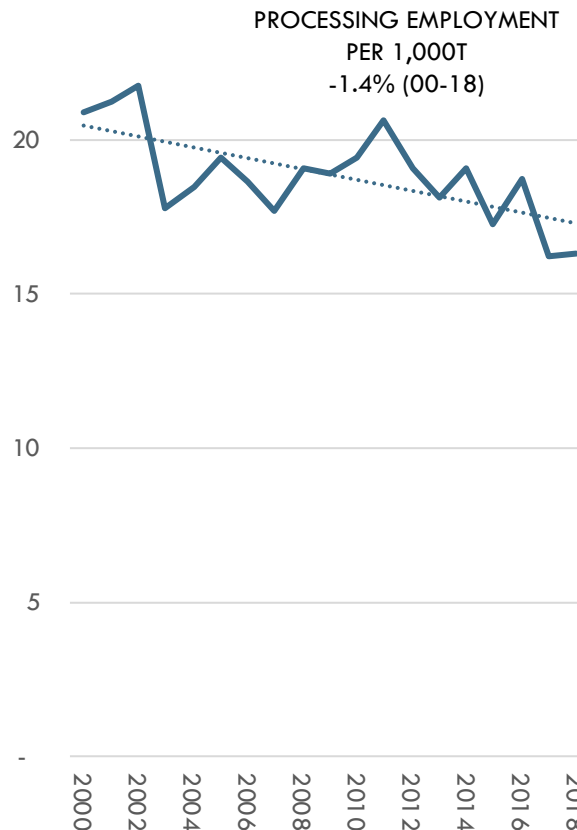
TOTAL = 34 processing units

# Poultry processing has falling employment per tonne of meat throughput, but growing overall employment

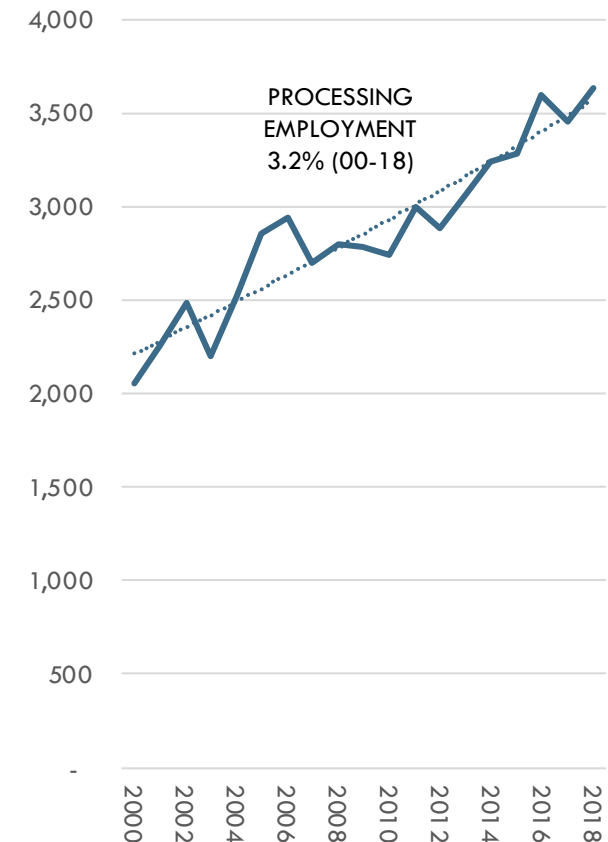
**TONNES PROCESSED**  
Tonnes; 1999-2017



**EMPL. PER 1,000 TONNE**  
Headcount/1,000t proc; 2000-18



**PROC. EMPLOYMENT**  
Headcount; 2000-2018



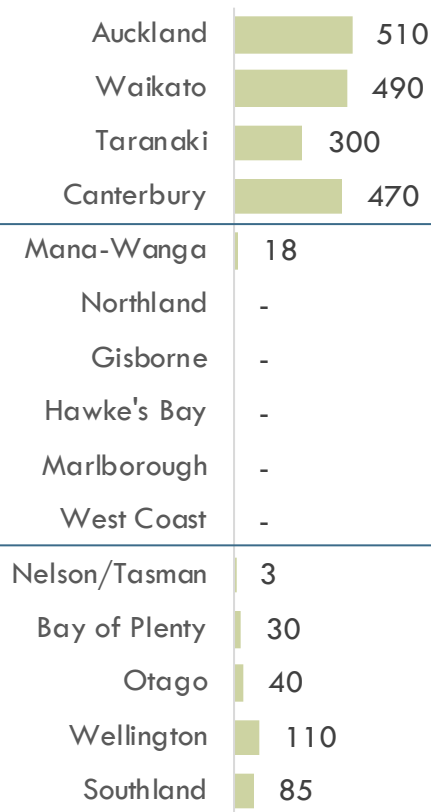
Note: calculation is previous year bird kill over current year farm employment numbers (for data reasons); Source: Statistics NZ; UN FAO; MAF/MPI; Coriolis analysis



# Auckland, Waikato, Taranaki and Canterbury created significant new poultry processing employment

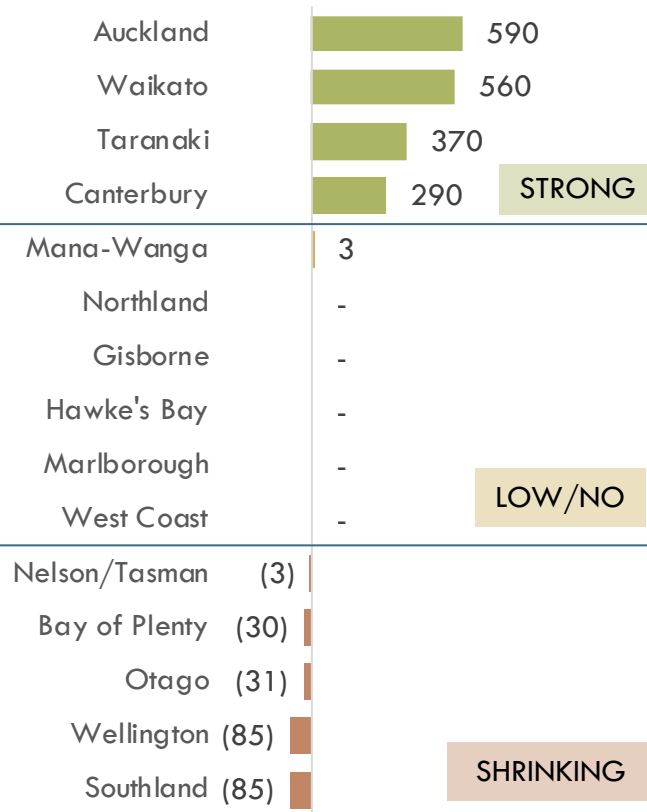
## EMPLOYMENT 2003

Headcount; 2003



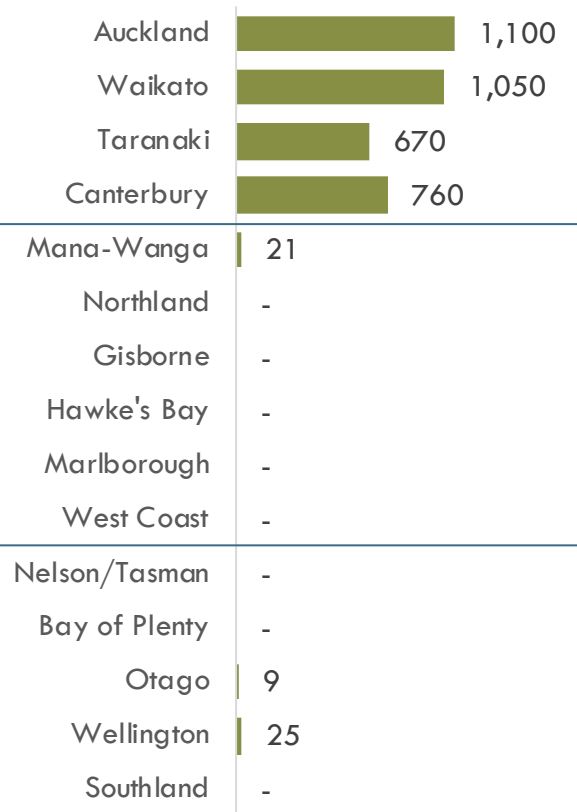
## 15Y CHANGE

Headcount; 03vs18



## EMPLOYMENT 2018

Headcount; 2003



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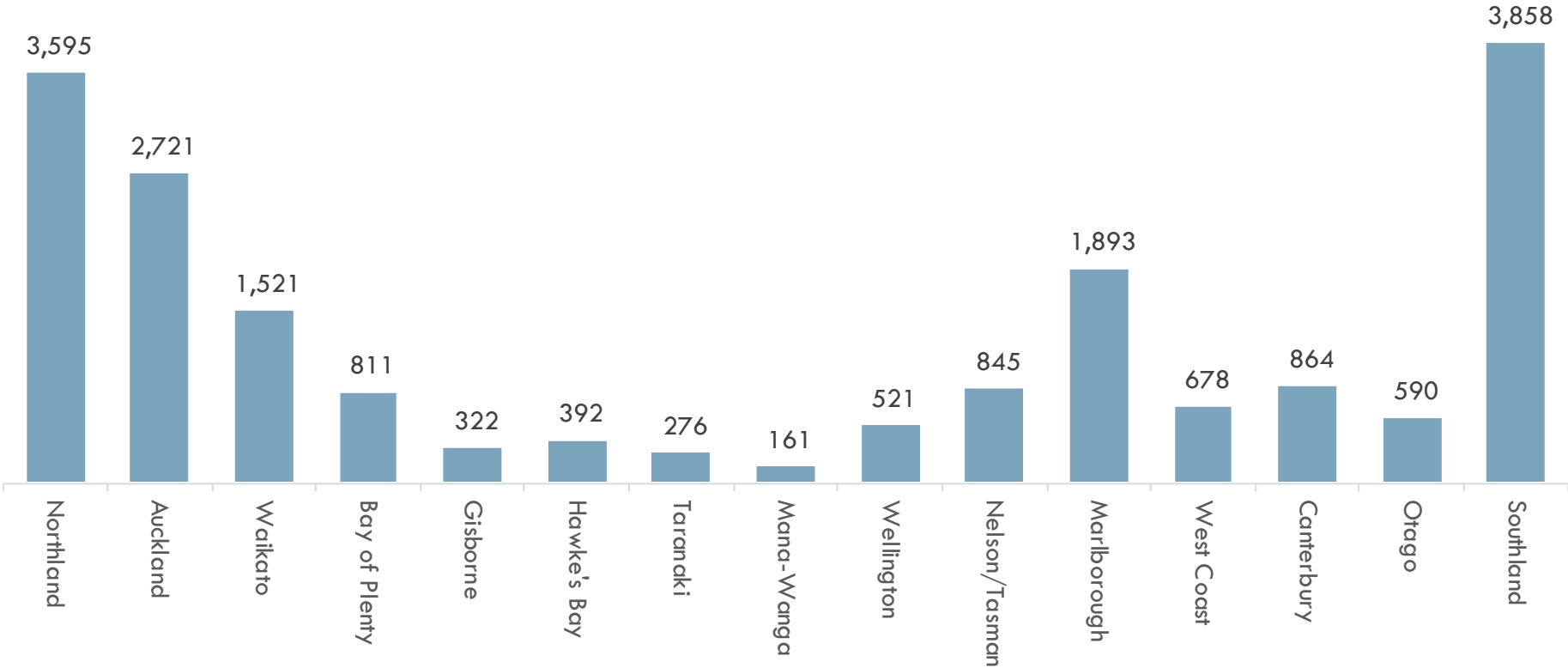
## *SUMMARY FINDINGS: The New Zealand seafood industry has declining employment in the seafood chain*

- New Zealand has an abundance of coastline spread across all regions
- Realised production of wild capture per kilometre of coastline has been falling and aquaculture has stalled
- Total New Zealand seafood volumes are falling
- The South Island, particularly Nelson/Tasman and Canterbury, lead in terms of share of total seafood production
- All regions of New Zealand have falling seafood industry geographic/activity units numbers (includes boats, plants etc.)
- There is a trend to fewer, larger seafood operations with more throughput and employees per unit
- Limited growth in employment per tonne is not counteracting falling total tonnes leading to net job losses
- Seafood is creating jobs in some regions, but not others; job losses in Nelson/Tasman the standout

# New Zealand has an abundance of coastline spread across all regions

## COASTLINE BY REGION

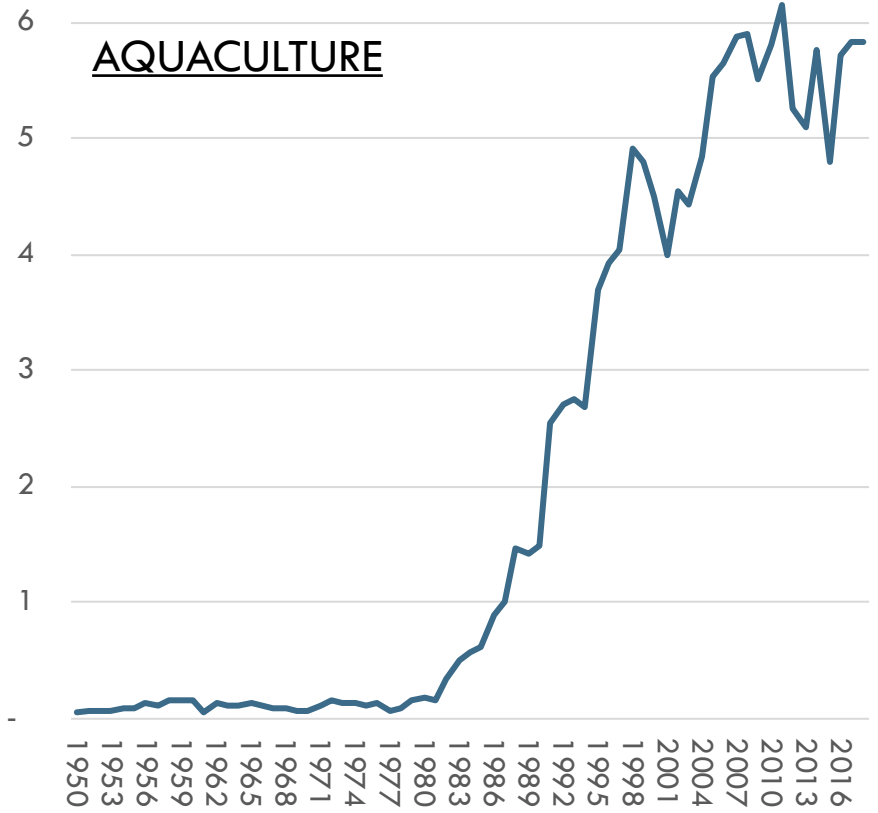
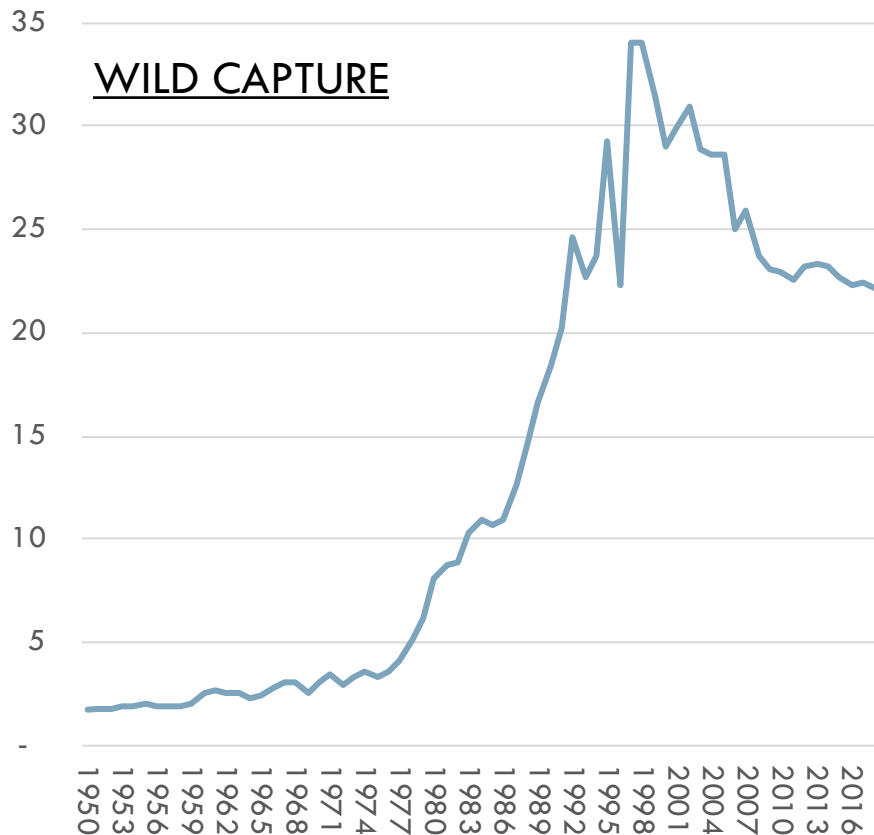
Kilometres; 2019



Note: May not be comparable to other sources, but uses common measure (polygon size) across all regions; Source: LINZ dataset; Statistics NZ; Coriolis analysis

# Realised production of wild capture per kilometre of coastline has been falling and aquaculture has stalled

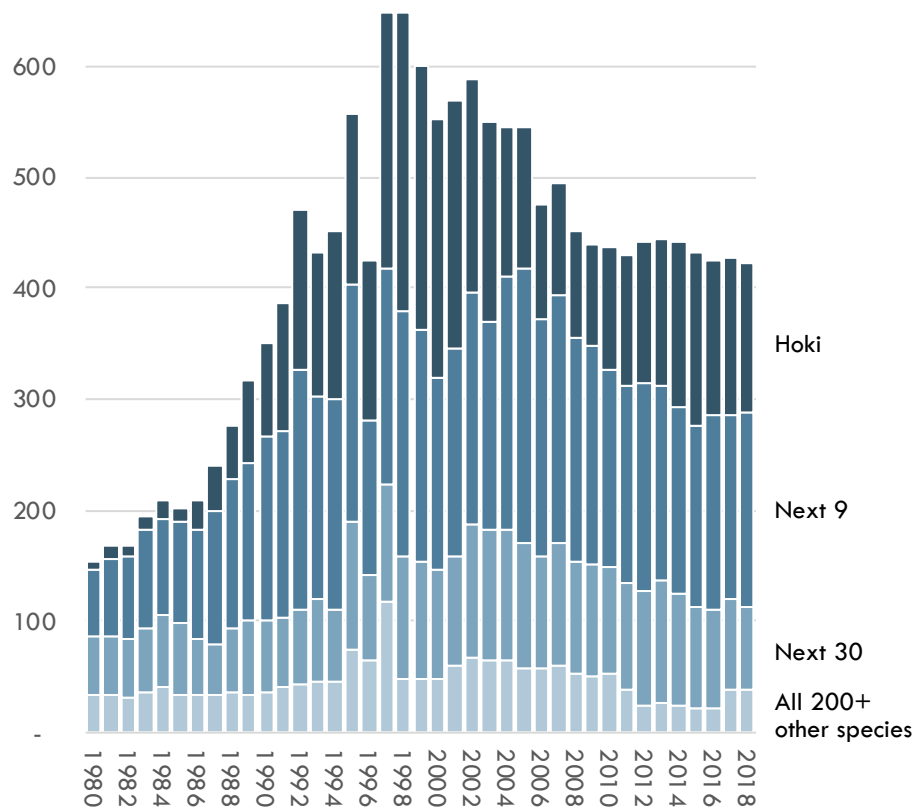
LANDED TONNES PER KM COASTLINE  
T/km; 1950-2018



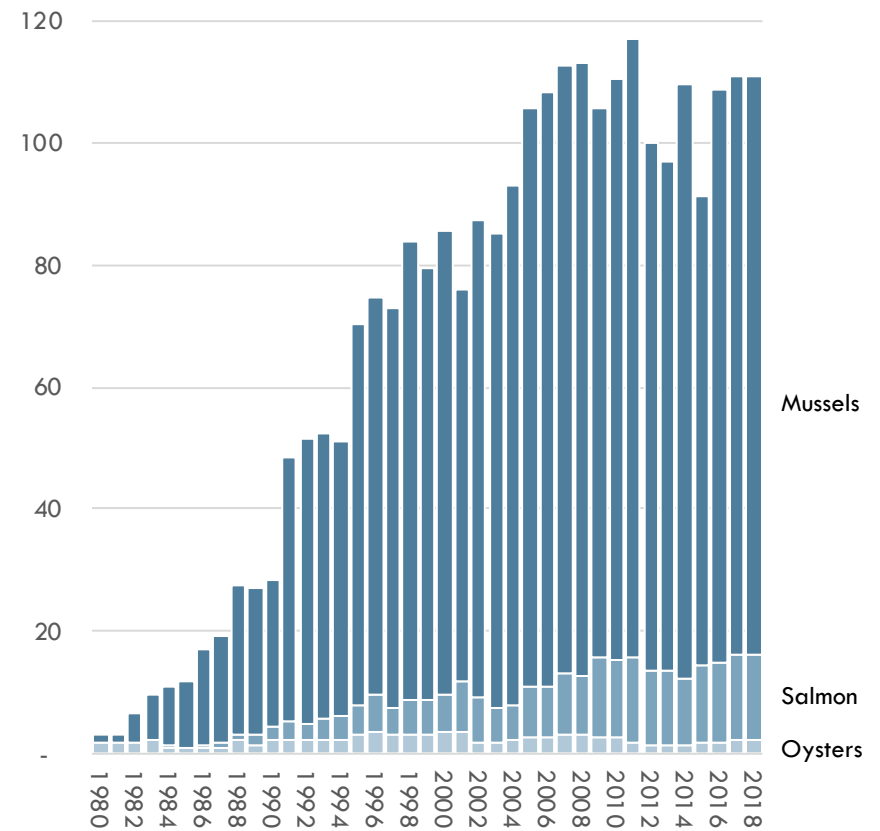
Source: UN FishStat; Statistics NZ; MPI/MAF/MoF; Coriolis analysis

# Total New Zealand seafood volumes are falling

**TONNES WILD CAPTURE**  
T; 000; 1980-2018



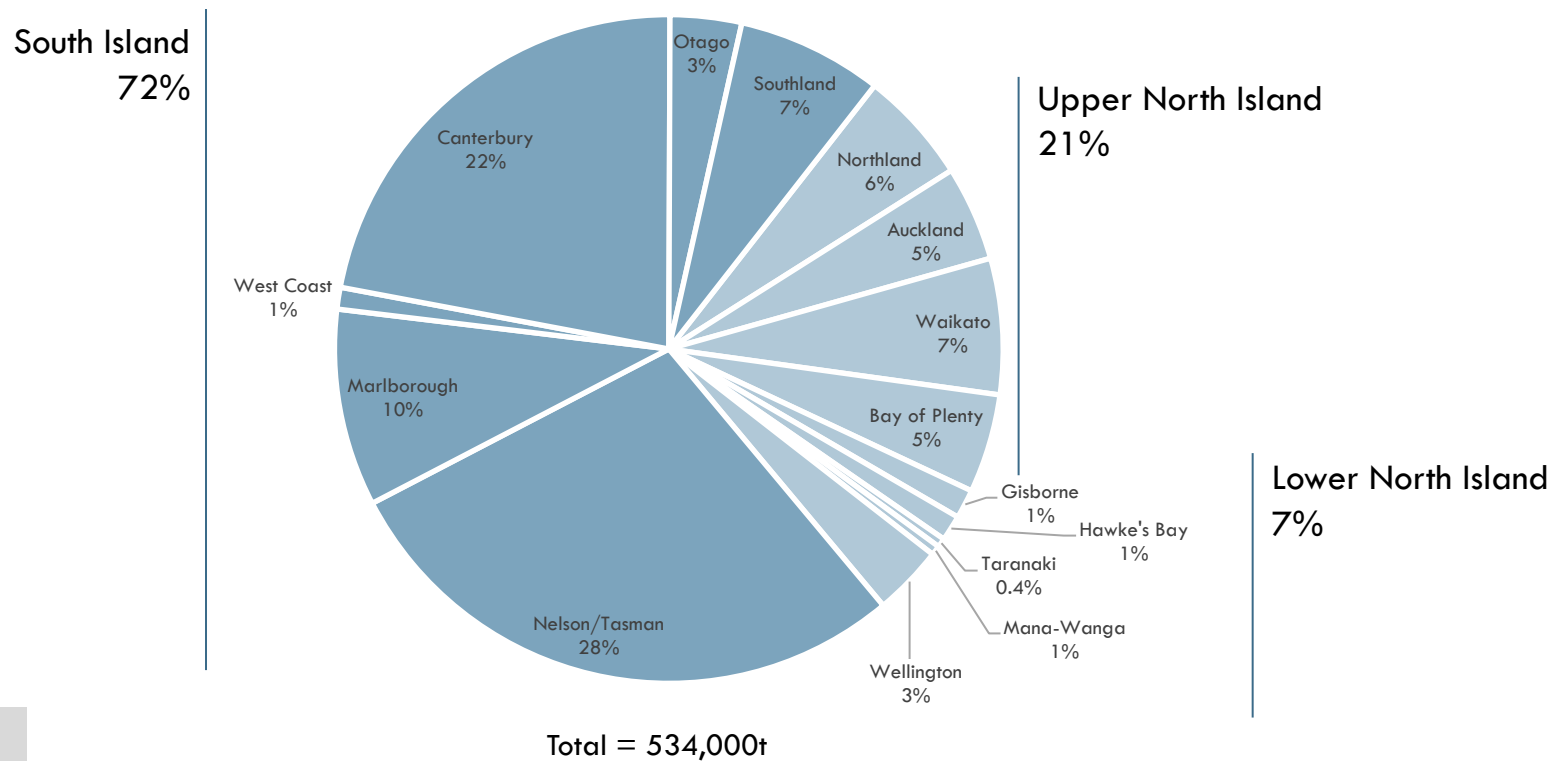
**TONNES AQUACULTURE**  
T; 000; 1980-2018



Source: UN FishStat; Statistics NZ; MPI/MAF/MoF; industry sources; Coriolis analysis and estimates

# The South Island, particularly Nelson/Tasman and Canterbury, lead in terms of share of total seafood production

ESTIMATED SHARE OF LANDED WILD & AQUACULTURE VOLUME BY REGION  
 % of tonnes; 2018



CORIOLIS ESTIMATE  
 Regional data is not collected

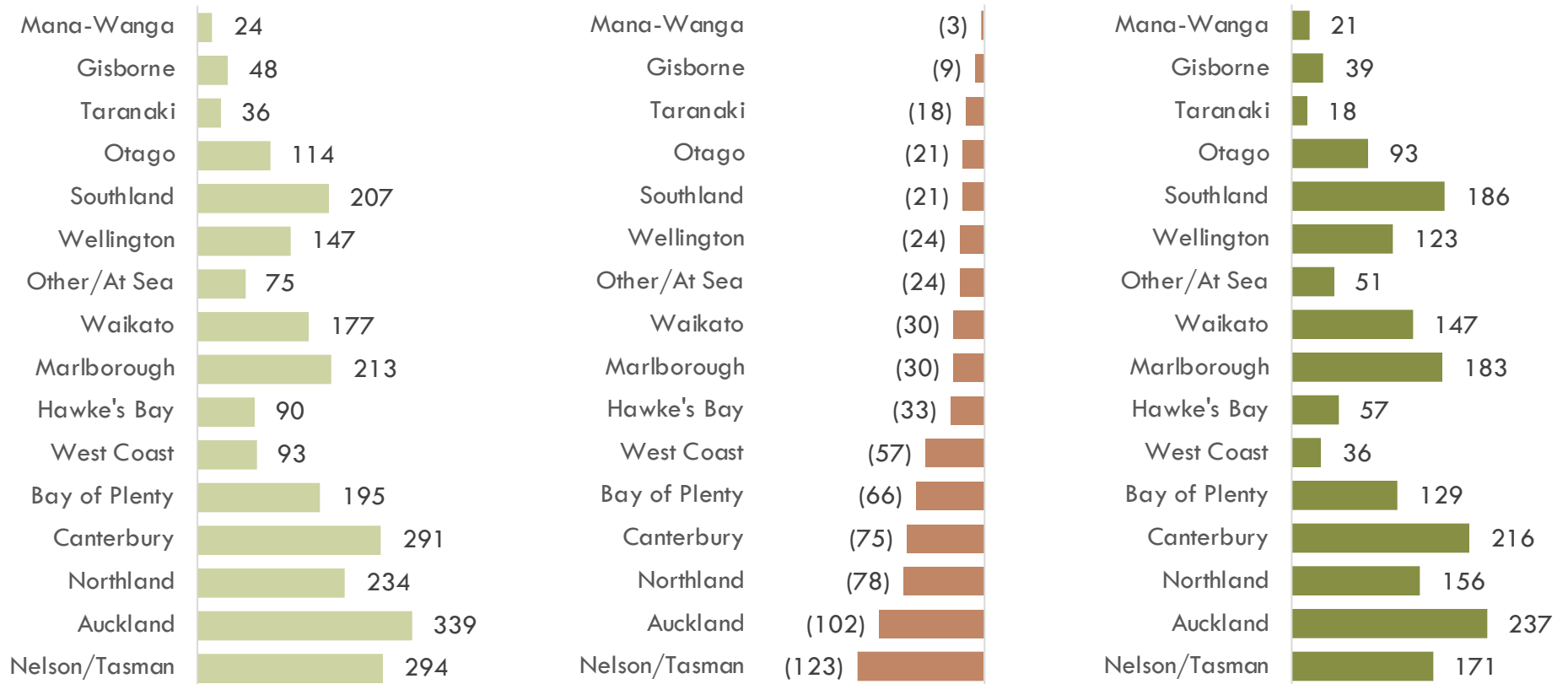
Note: point of landing not location of capture; Source: Coriolis modelling

# All regions of New Zealand have falling seafood industry geographic/activity units numbers (boats, processing plants etc.)

**OPERATIONAL UNITS 2000**  
*Units; 2000*

**18Y CHANGE**  
*Units; 00vs18*

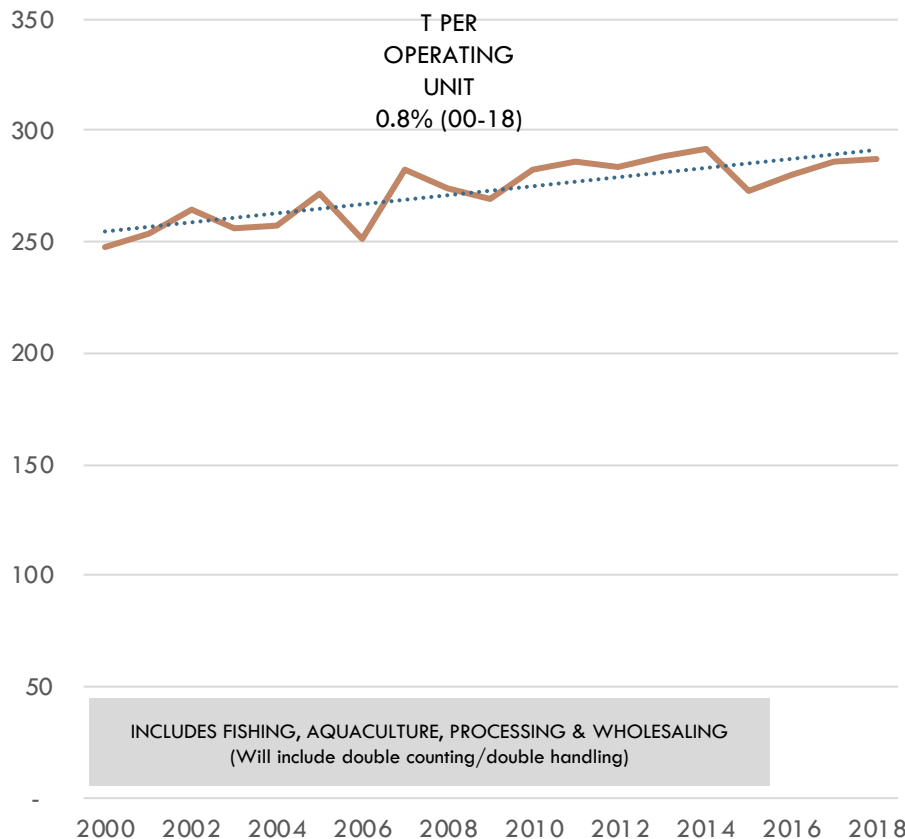
**OPERATIONAL UNITS 2018**  
*Units; 2018*



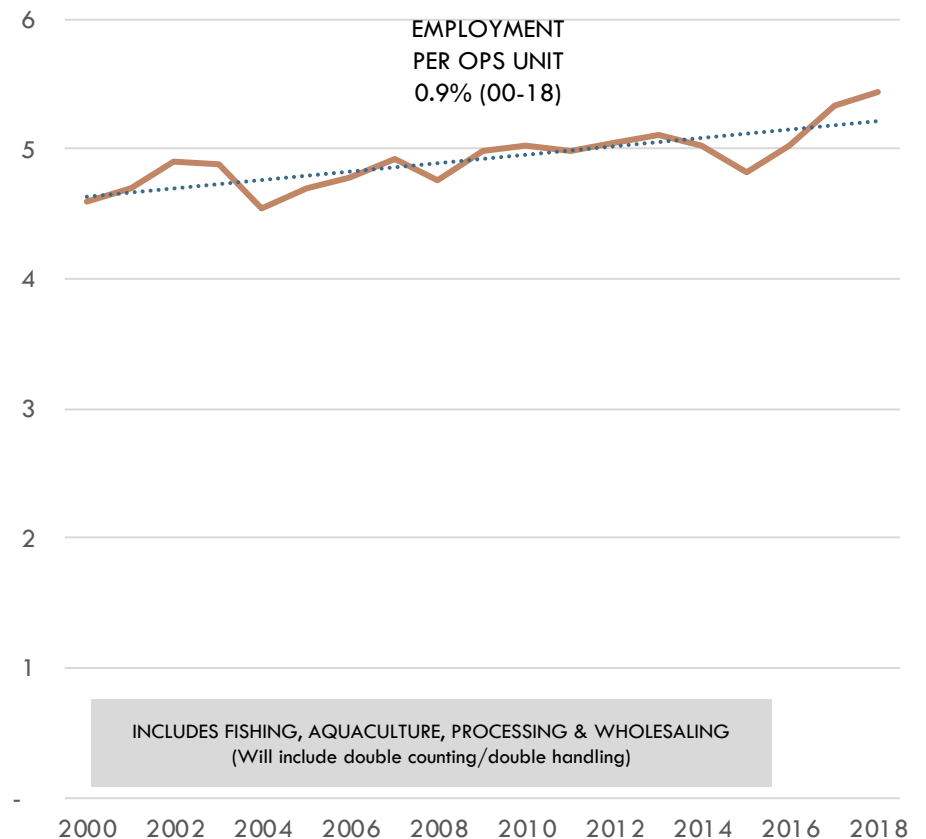


# There is a trend to fewer, larger seafood operations with more throughput and employees per unit

**TONNES PER TOTAL INDUSTRY OPS UNIT**  
T/unit; 2000-2018



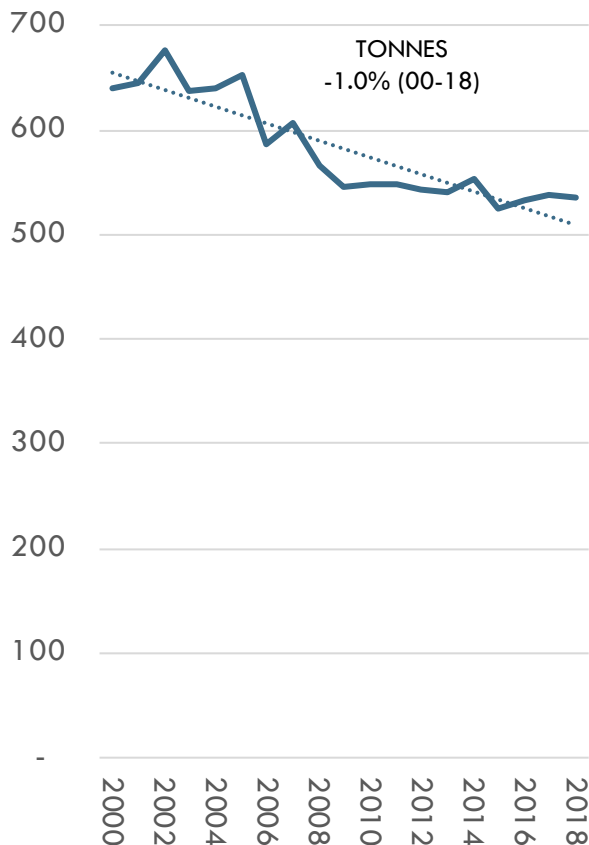
**EMPLOY. PER TOTAL INDUSTRY OPS UNIT**  
Headcount/unit; 2000-2018



Source: UN FishStat; Statistics NZ; MPI/MAF/MoF; industry sources; Coriolis analysis and estimates

# Limited growth in employment per tonne is not counteracting falling total tonnes leading to net job losses

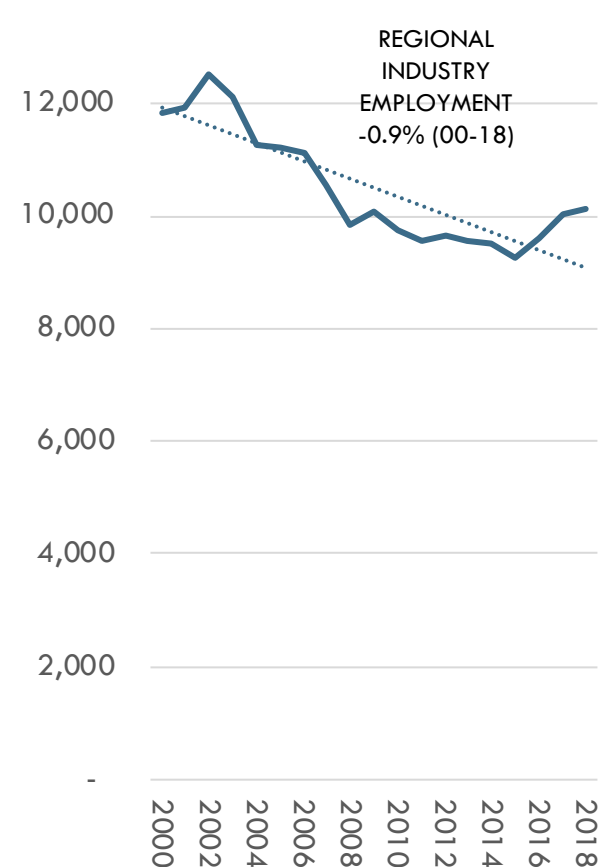
**TONNES: WILD & AQUA**  
Tonne; 000; 2000-2018



**EMP. PER 1,000 TONNE**  
Headcount/1,000t; 2000-2018



**TOTAL EMPLOYMENT**  
Headcount; 2000-2018



Source: Statistics NZ; UN FAO; MAF/MPI; Coriolis analysis

# Seafood is creating jobs in some regions, but not others; job losses in Nelson/Tasman are the standout

## EMPLOYMENT 2000

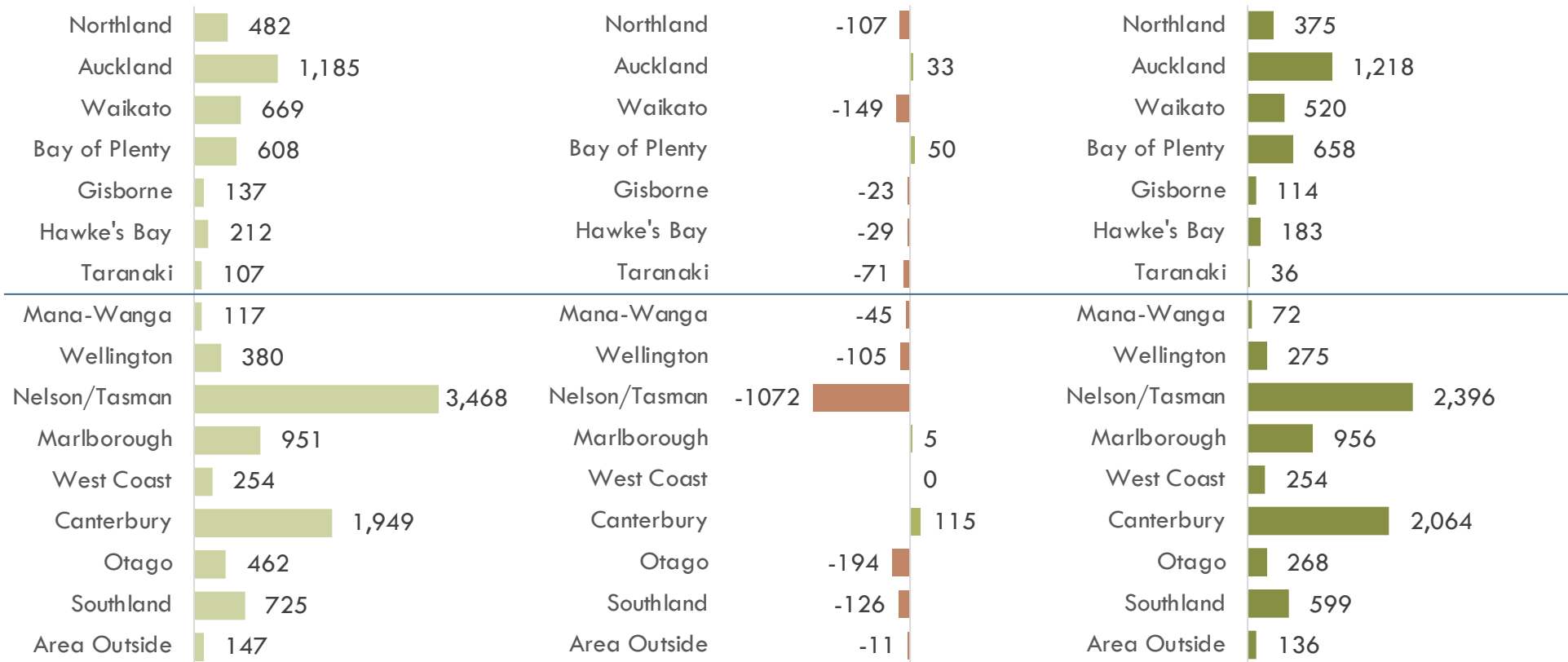
Headcount; 2000

## 18Y CHANGE

Headcount; 00vs18

## EMPLOYMENT 2018

Headcount; 2018



Note: Area Outside = at sea; Source: Statistics NZ; UN FAO; MAF/MPI; Coriolis analysis

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## *SUMMARY FINDINGS: The produce (fruit & vegetable) industry has declining on-farm jobs and mild post-farm job growth*

### PRODUCTION

- The total area in produce (fruit & vegetable (f&v)) is declining
- The number of produce (fruit & vegetable) geographic farm units is declining
- On-farm jobs on produce (fruit & vegetable) geographic farm units are declining

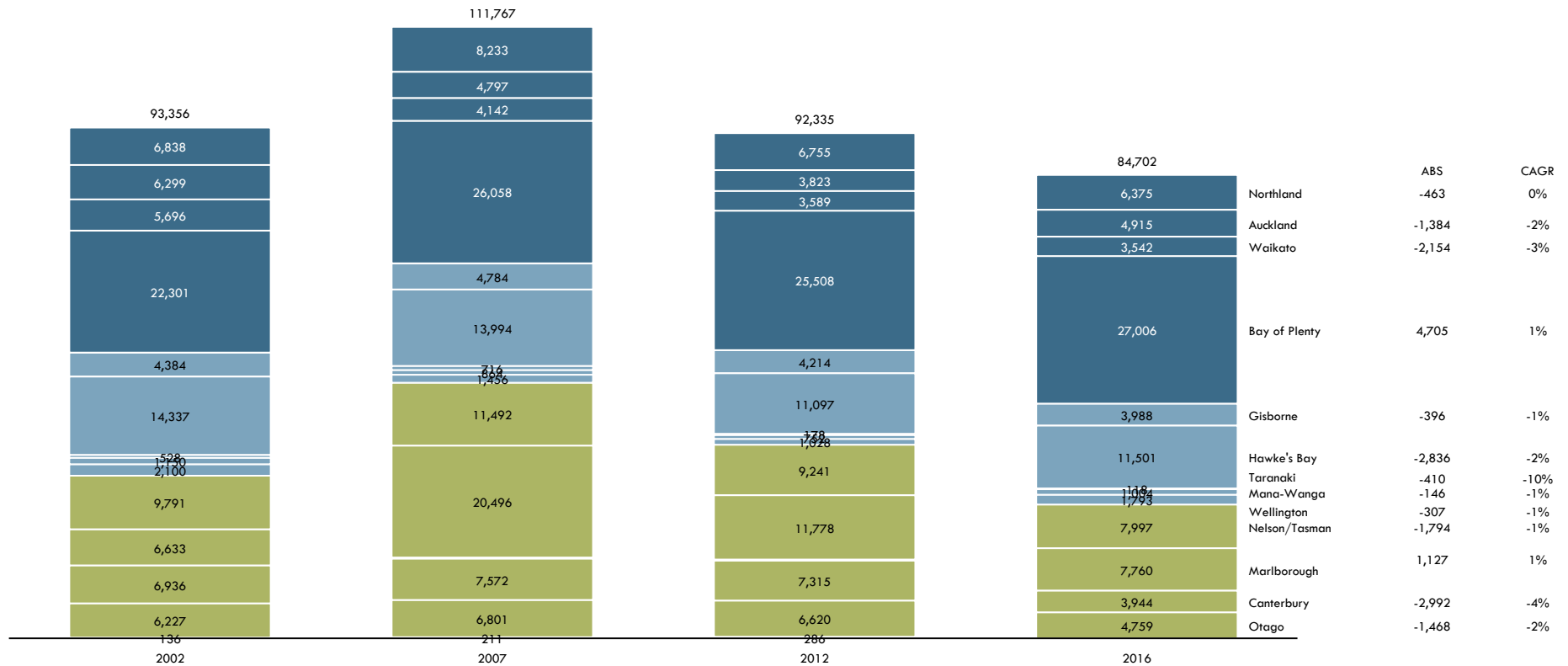
### WHOLESALING & PROCESSING

- Overall, fruit & vegetable processors and wholesalers are spread across the country; however, unit growth is low
- Fruit & vegetable processor/wholesaler numbers showing moderate growth across most regions
- Overall, New Zealand is trending to more, smaller fruit & vegetable processing and wholesaling units
- New Zealand produce processors/wholesalers are creating modest numbers of new jobs and jobs are spread across all regions
- Mild overall employment growth masks regional shifts, with the Upper North Island leading growth and many others declining

# The total area in produce (fruit & vegetable(f&v)) is declining

## AREA OF FRUIT, NUT & VEGETABLE (EXCLUDING (X) WINE) BY REGION

Hectares; actual; 2000-2018\*

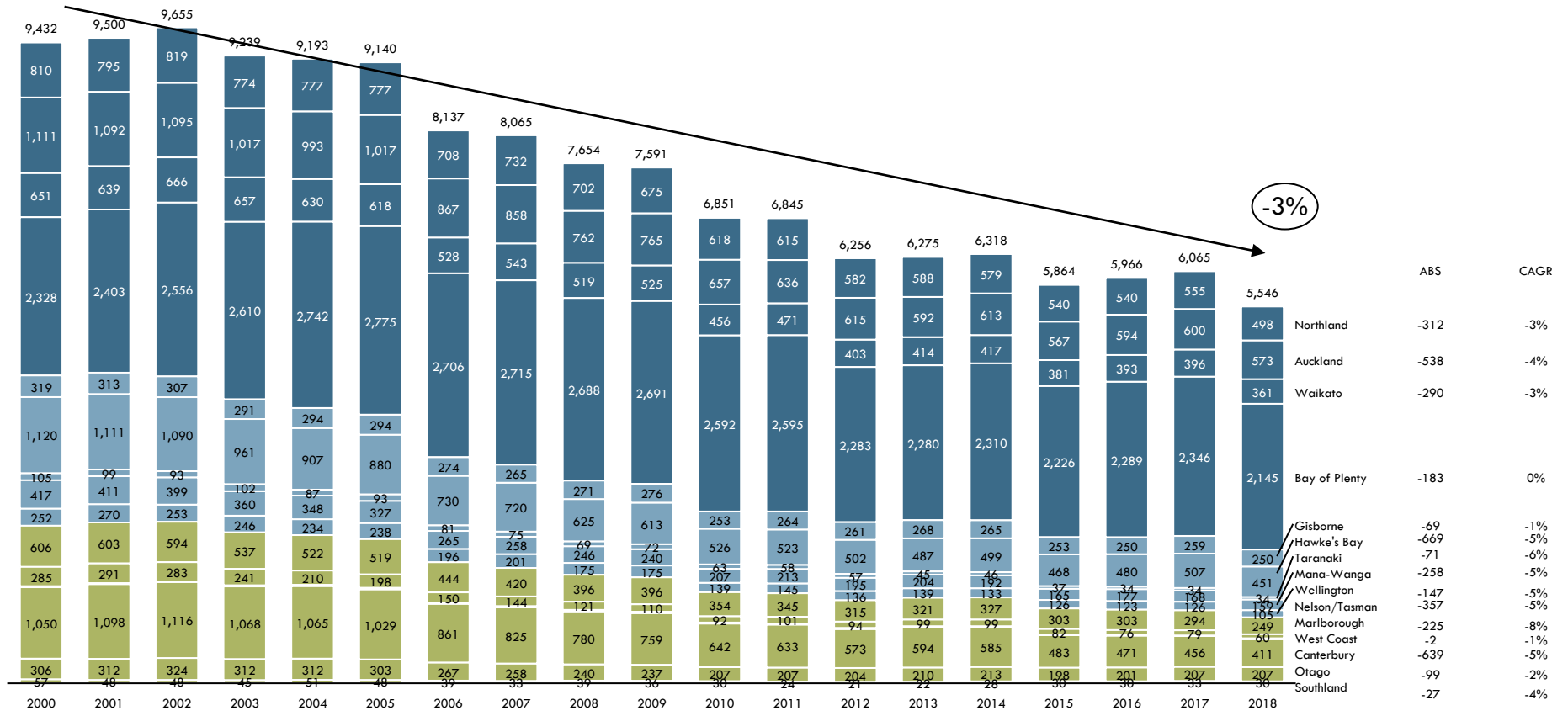


\* All available data; Note: West Coast and Southland have no area in 2016 (at source) and show are not shown on the right, but historical area is in the totals; Source: MfE/Statistics New Zealand; Coriolis modelling, analysis and classification

# The number of produce (fruit & vegetable) geographic farm units is declining

## NUMBER OF FRUIT, NUT & VEGETABLE (X WINE) GEOGRAPHIC UNITS BY REGION

Units; actual; 2000-2018\*

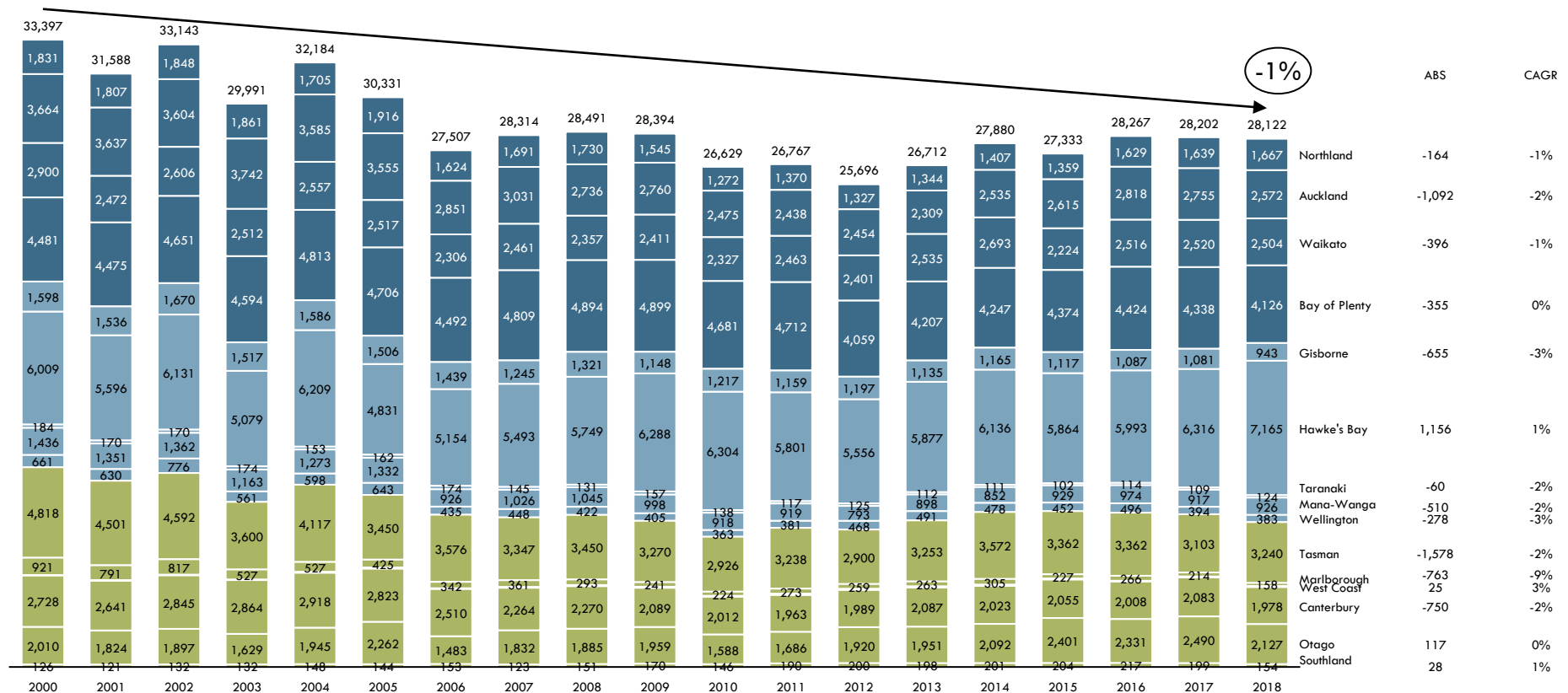


\* All available data; Note: defined as A012 & A013 (excludes A011); Source: Statistics New Zealand; Coriolis analysis and classification

# On-farm jobs on produce (fruit & vegetable) geographic farm units are declining

## EMPLOYMENT ON FRUIT, NUT & VEGETABLE (X WINE) GEOGRAPHIC UNITS BY REGION

Headcount (including owner-operators); actual; 2000-2018\*

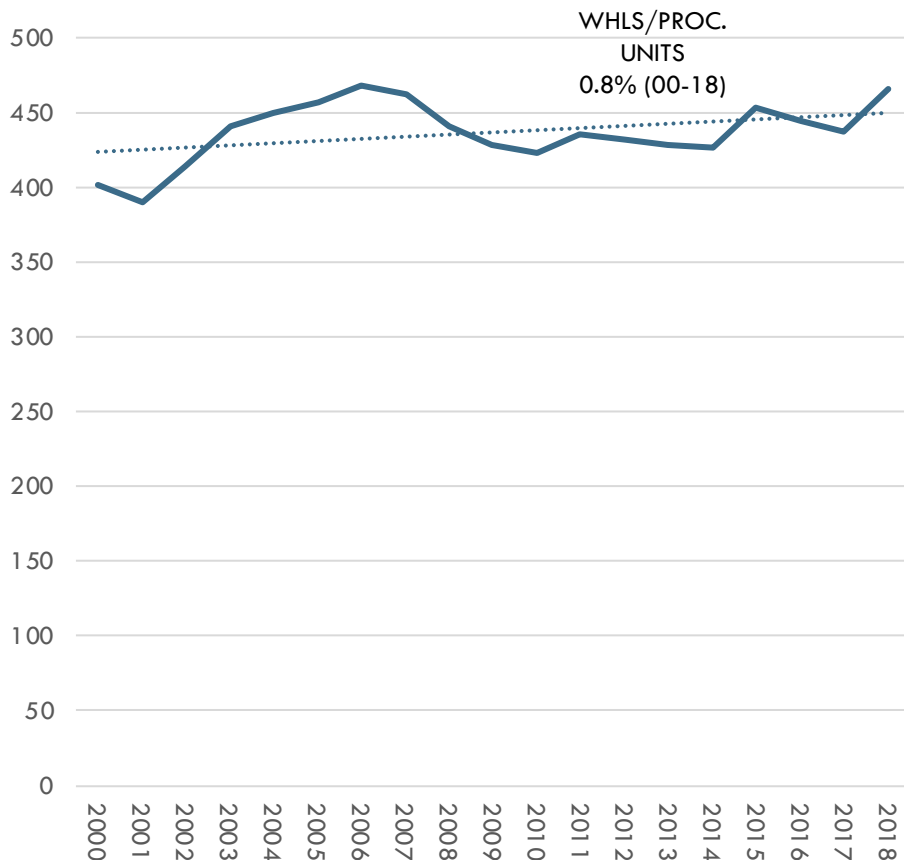


\* All available data; Note: West Coast totals not shown to aid chart legibility; defined as A012 & A013 (excludes A011); Source: Statistics New Zealand; Coriolis analysis and classification

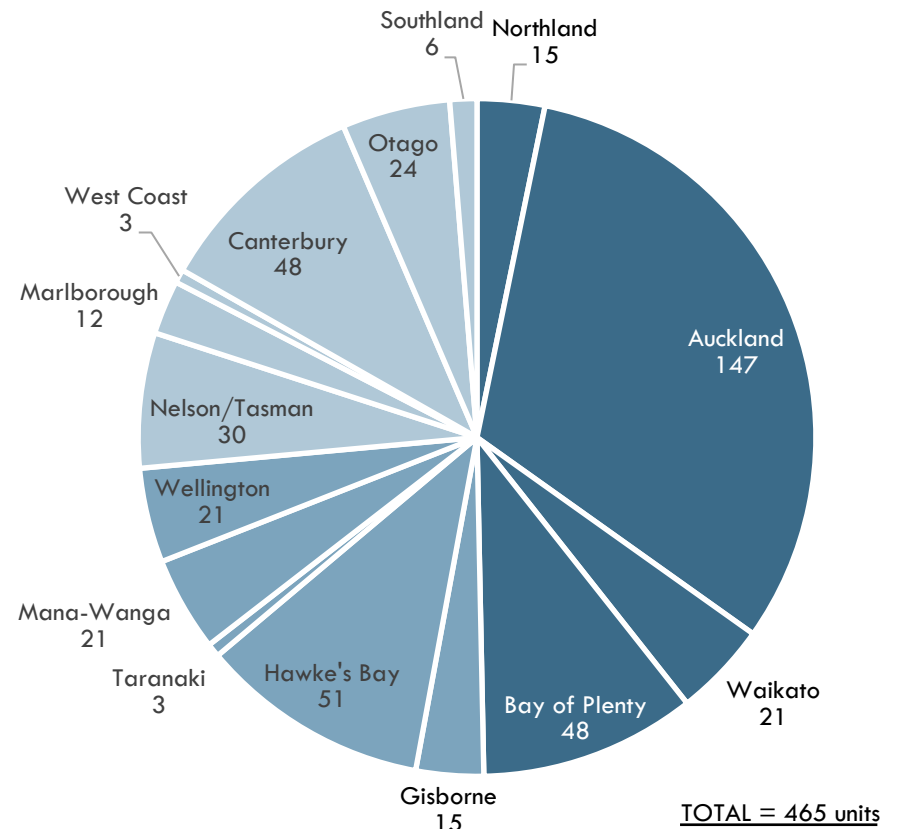


# Turning to processing and wholesaling, units are spread across the country; however, unit growth is low (0.8% CAGR)

**PRODUCE PROCESSING/WHOLESALE**  
Geographic units; 2000-2018



**PRODUCE PROC/WHLS BY REGION**  
Geographic units; 2018

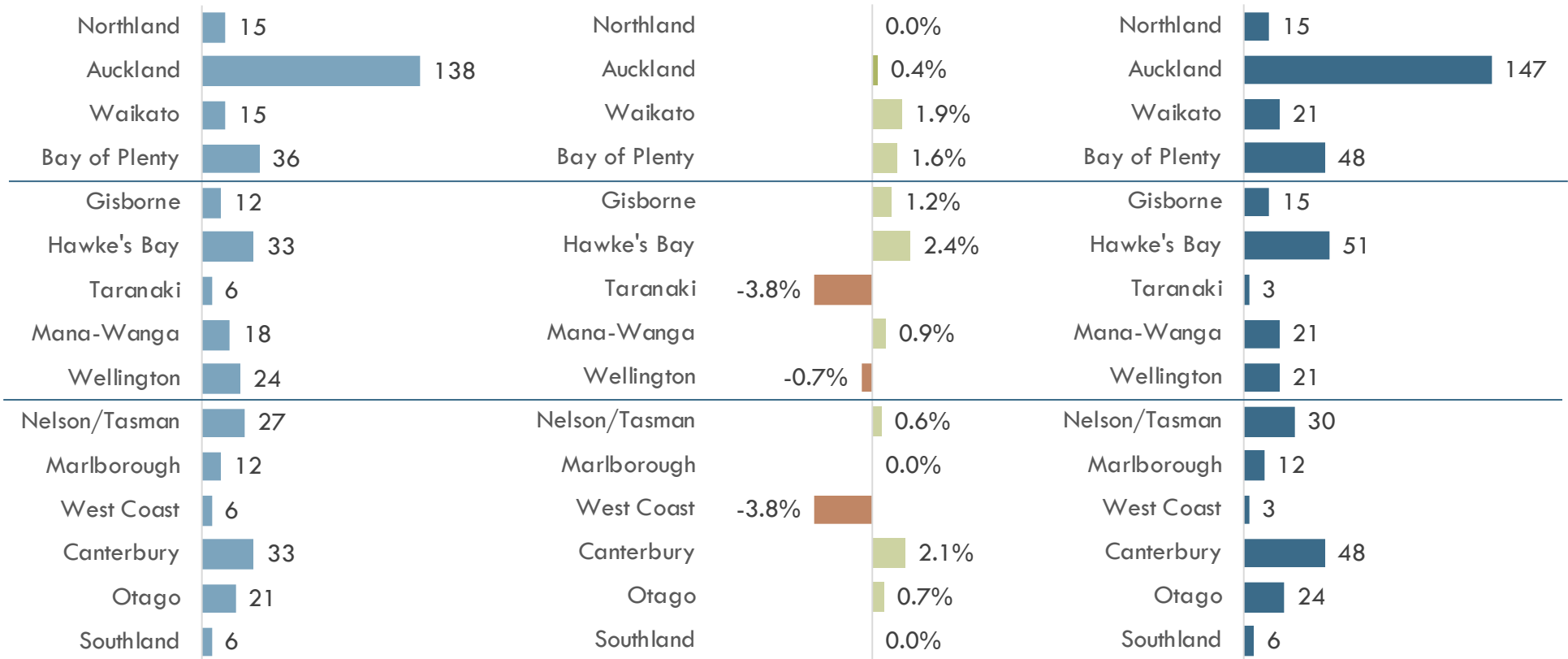


# Fruit & vegetable processor/wholesaler numbers showing modest growth across most regions

**OPERATIONS IN 2000**  
Geographic units; 2000

**18Y UNIT CHANGE (CAGR)**  
%; 2000-2018

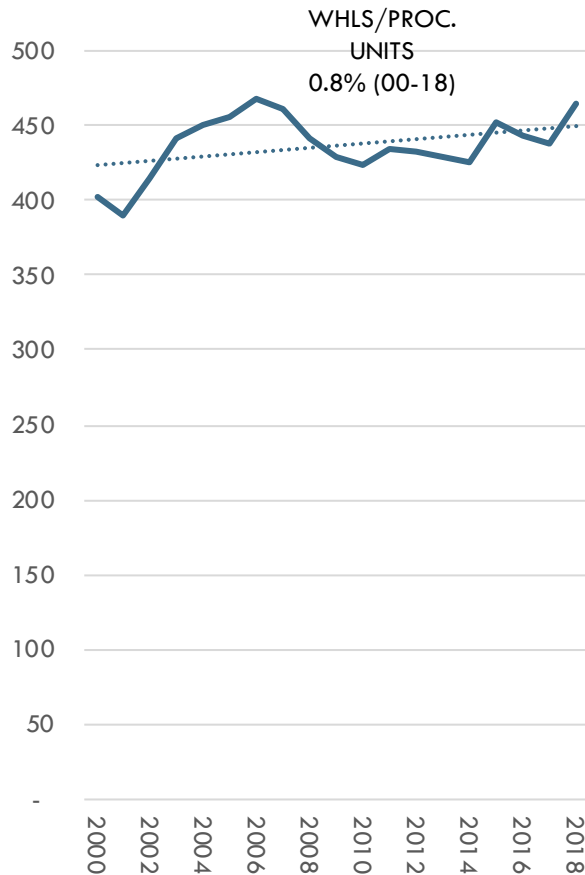
**OPERATIONS IN 2018**  
Geographic units; 2018



# Overall, New Zealand is trending to more, smaller fruit & vegetable processing and wholesaling units

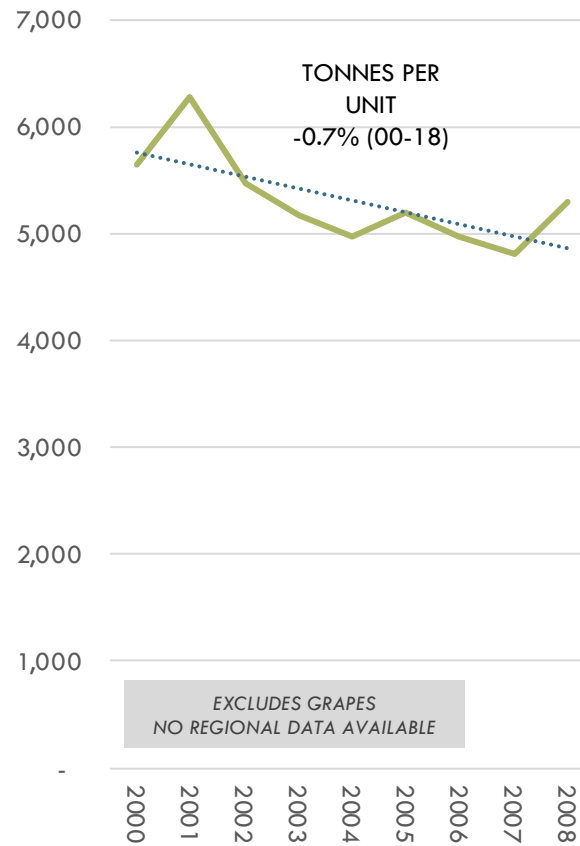
## # OF PROC/WHLS

Units; 2000-2018



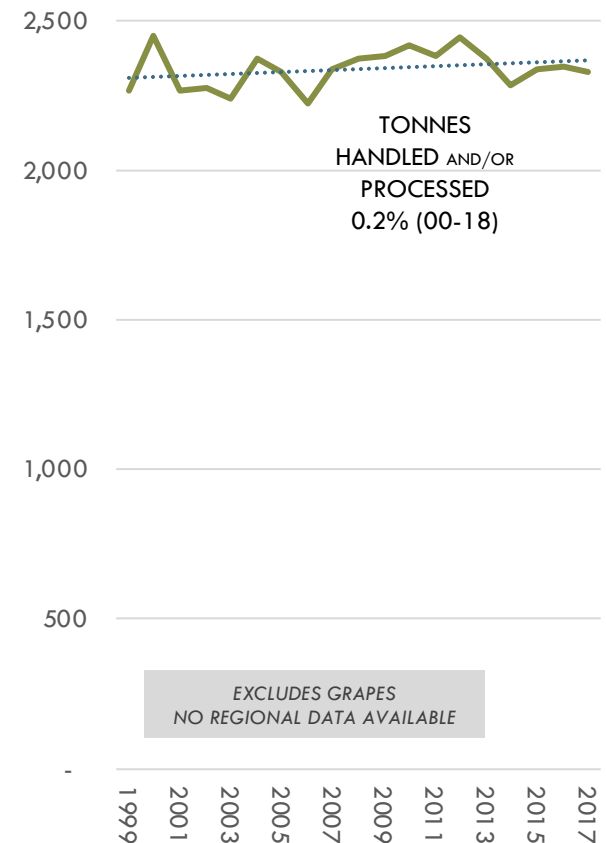
## TONNES/UNIT

T/geographic unit; 2000-2018\*



## TONNES OF PRODUCE

T; 000; 1999-2017



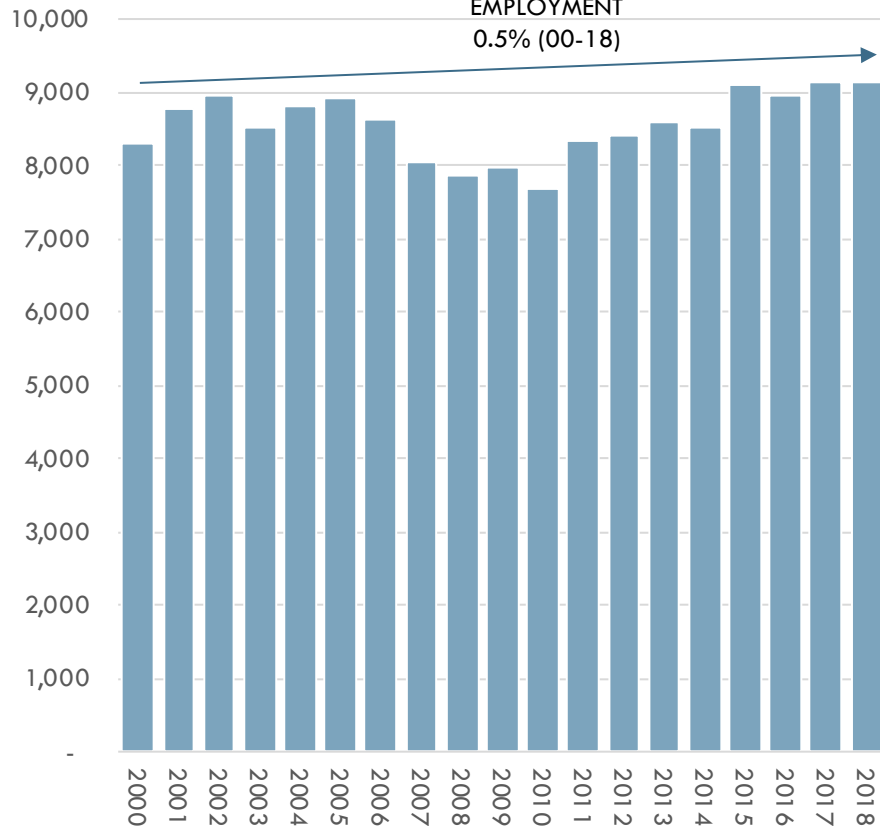
\*Uses 2017 volume over 2018 units (for data related reasons); Source: Statistics NZ; UN FAO; MAF/MPI; Coriolis analysis

# New Zealand produce processors/wholesalers are creating modest numbers of new jobs and jobs are spread across regions

## PRODUCE PROC/WHLS EMPLOYMENT

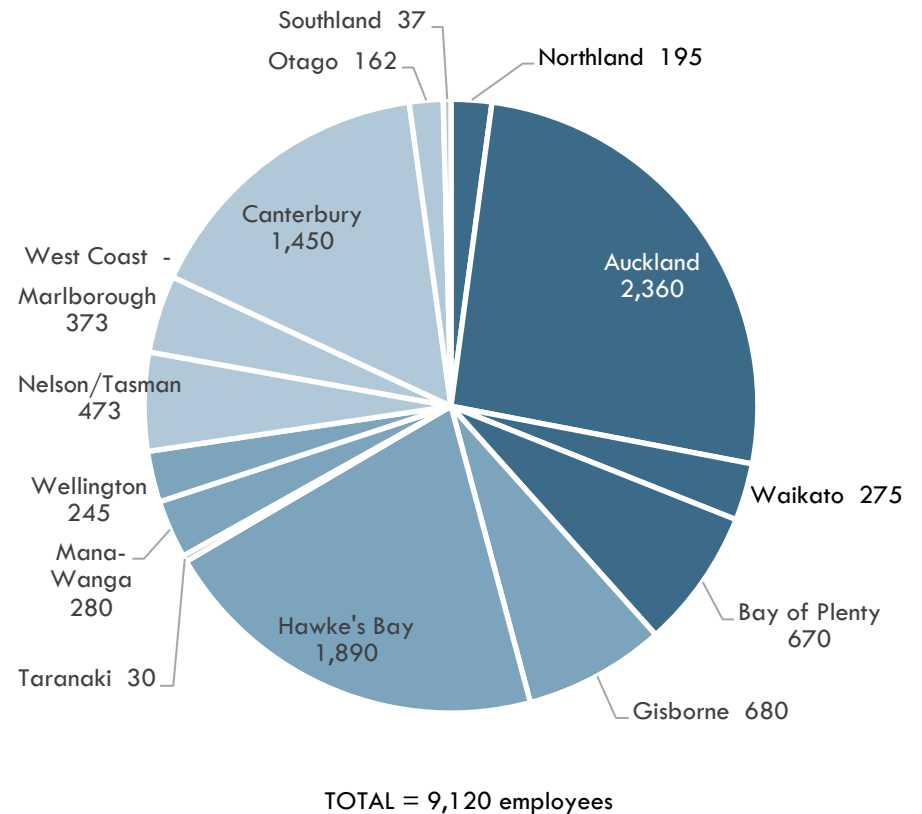
Headcount; 2000-2018

WHOLESALE & PROCESSING EMPLOYMENT 0.5% (00-18)



## PRODUCE PROC/WHLS EMPLOYMENT

Headcount; 2018



# Mild overall employment growth masks regional shifts, with the Upper North Island leading growth and many others declining

## EMPLOYMENT 2000

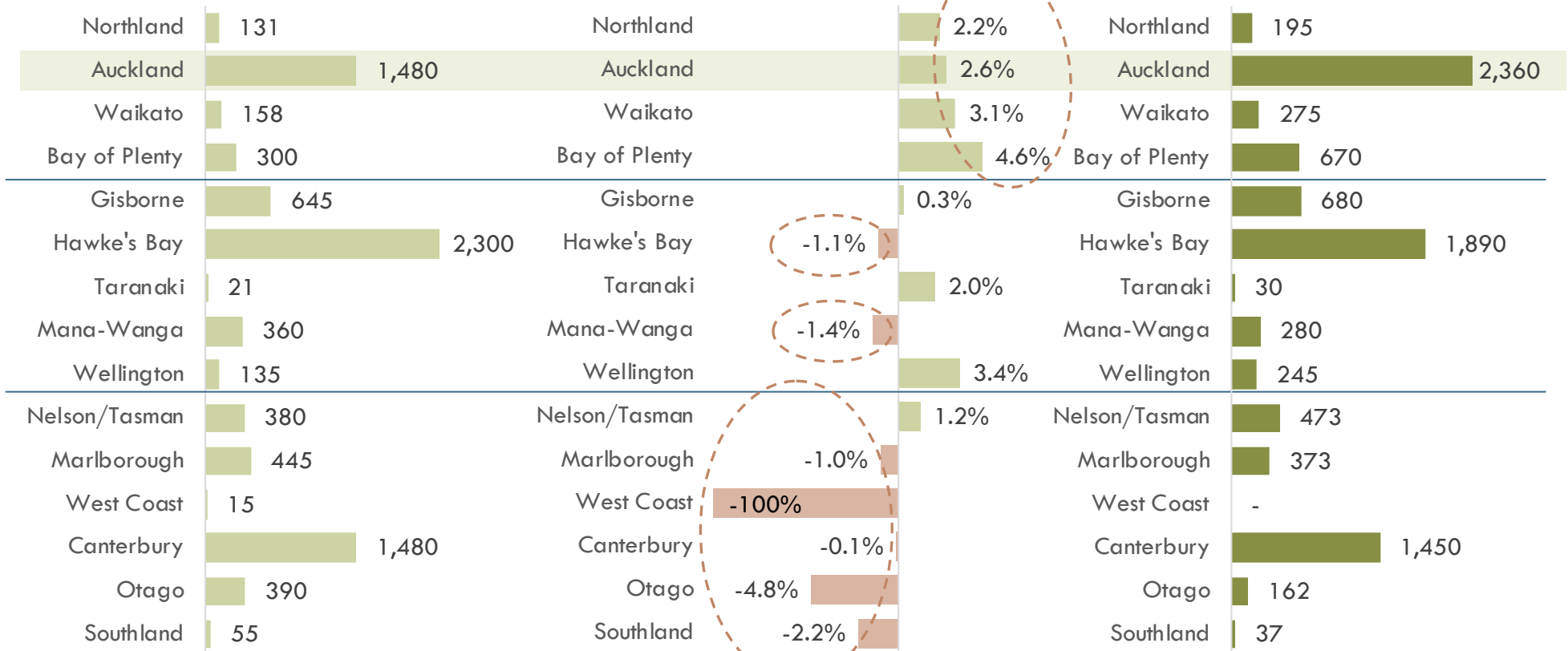
Headcount; 2000

## 18Y CHANGE (CAGR)

Headcount; 00vs18

## EMPLOYMENT 2018

Headcount; 2018



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# *SUMMARY FINDINGS: New Zealand has growing employment in the overall arable grains chain*

## **GRAIN/ARABLE CROP PRODUCTION**

- New Zealand is moving to more crop farms with more area per farm and more overall area in arable crops
- However, area growth is coming from crops grown for on-farm consumption (e.g. feed) rather than 'cash crop' grains for market
- The number of arable crop farms is growing across most regions, but declining in Canterbury
- Average crop farm sizes are growing
- Total crop area is growing across all regions
- On-farm employment in crops is growing
- Crop farms are creating employment across many regions

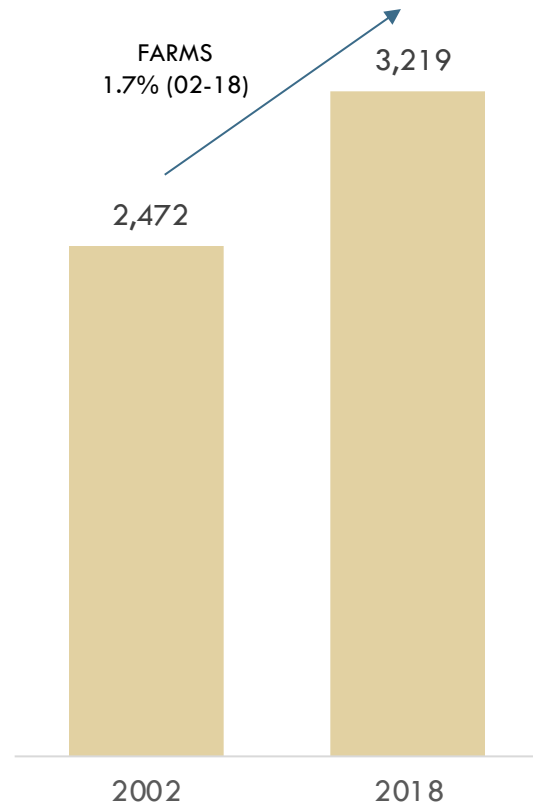
## **GRAIN WHOLESALING & PROCESSING**

- Grain processors and wholesalers are located predominantly in Auckland and Canterbury, with overall numbers flat to declining
- Grain processors and wholesalers numbers are growing in Auckland, Waikato, Marlborough and Otago; shrinking elsewhere
- Overall, New Zealand is seeing limited change in the number of grain processing and wholesaling units
- Grain processors/wholesalers jobs are predominantly in Auckland and Canterbury and employment is not growing
- Mild overall decline masks regional shifts, with Auckland, Canterbury and Otago growing jobs while all others are declining

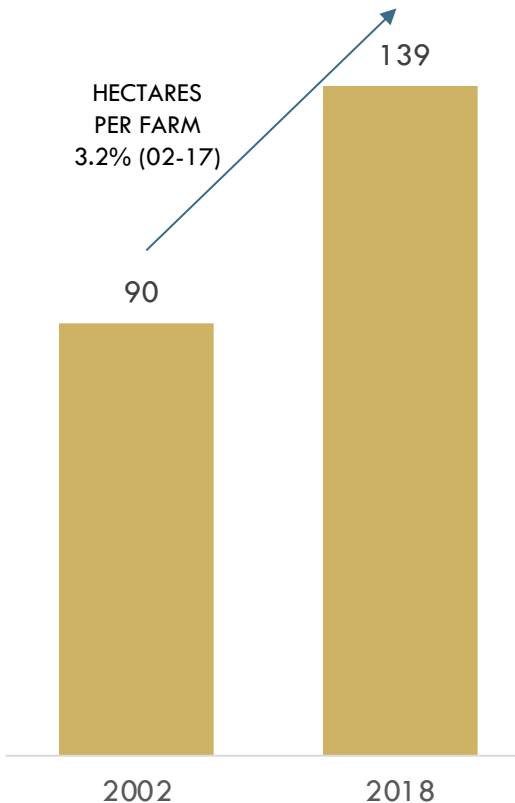
# New Zealand is moving to more crop farms with more area per farm and more overall area in arable crops

Note: Different sources; data issues exist; treat as directional

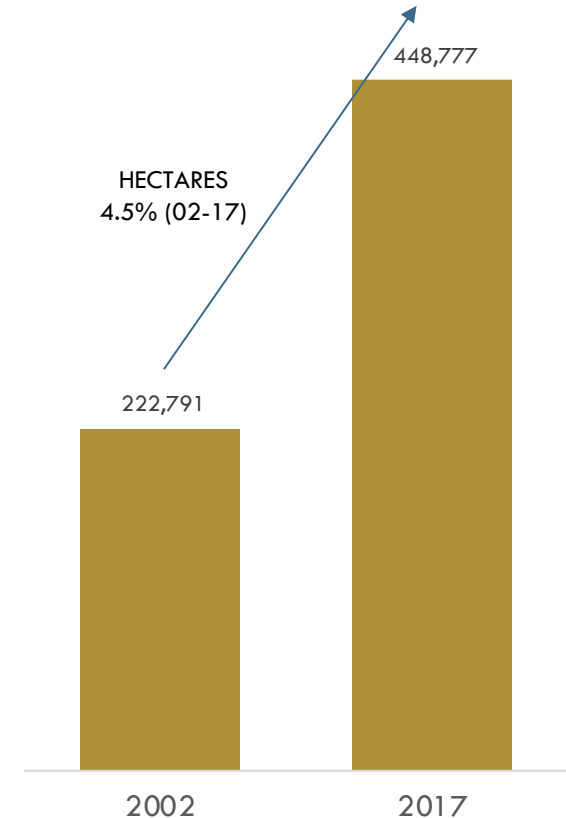
**CROP FARM UNITS**  
#; 02vs18



**AVERAGE AREA/UNIT**  
m<sup>2</sup>; 02vs17/18\*



**TOTAL AREA IN CROPS**  
m<sup>2</sup>; 02vs17



\*Uses 2017 area over 2018 units (no 2018 area available); Source: Statistics NZ; UN FAO; MAF/MPI; Ministry for the Environment; Coriolis analysis

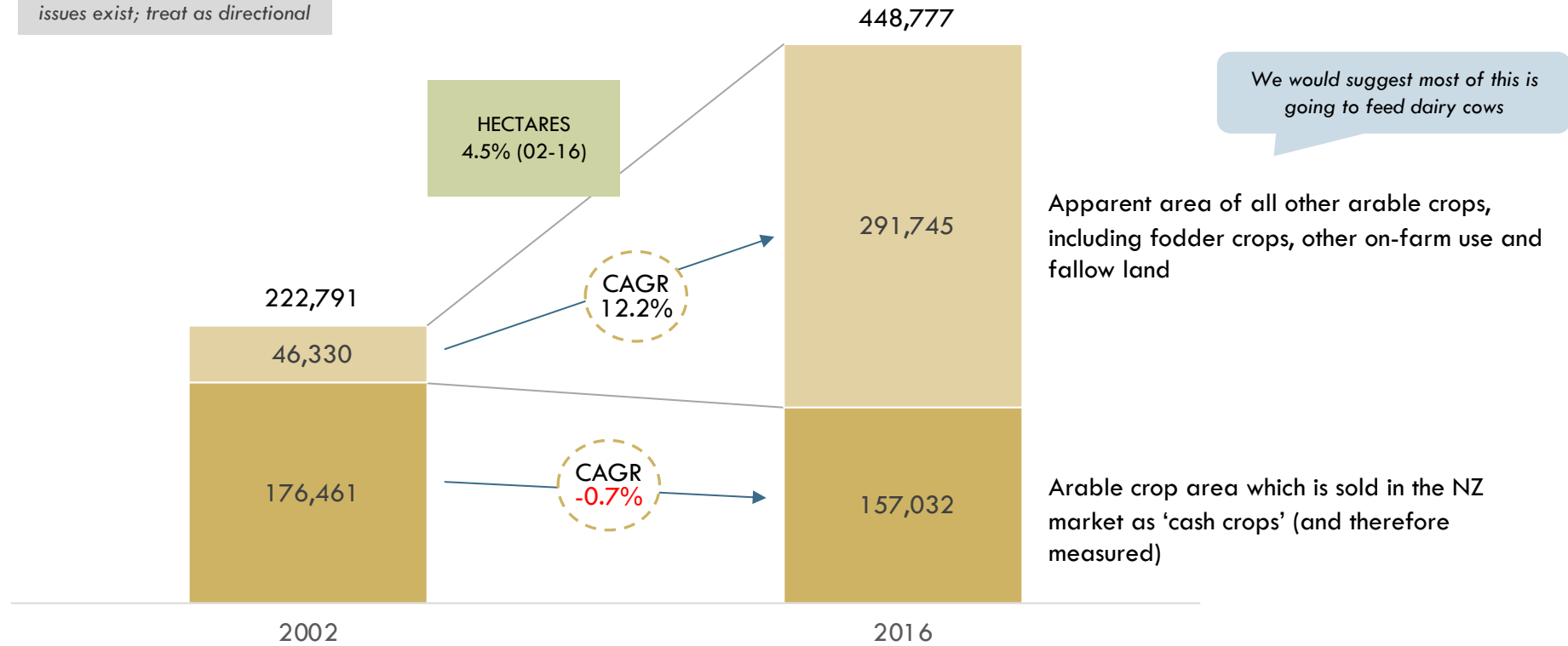


*However, area growth is coming from crops grown for on-farm consumption (e.g. feed) rather than ‘cash crop’ grains for market*

### TOTAL NEW ZEALAND ARABLE CROP AREA BY USE

*Ha; 02vs16*

*Note: Different sources; data issues exist; treat as directional*



# The number of arable crop farms is growing across most regions, but declining in Canterbury

## CROP FARMING UNITS Units; 2002

## 16Y UNIT CHANGE (CAGR) %; 02vs18

## CROP FARMING UNITS Units; 2018

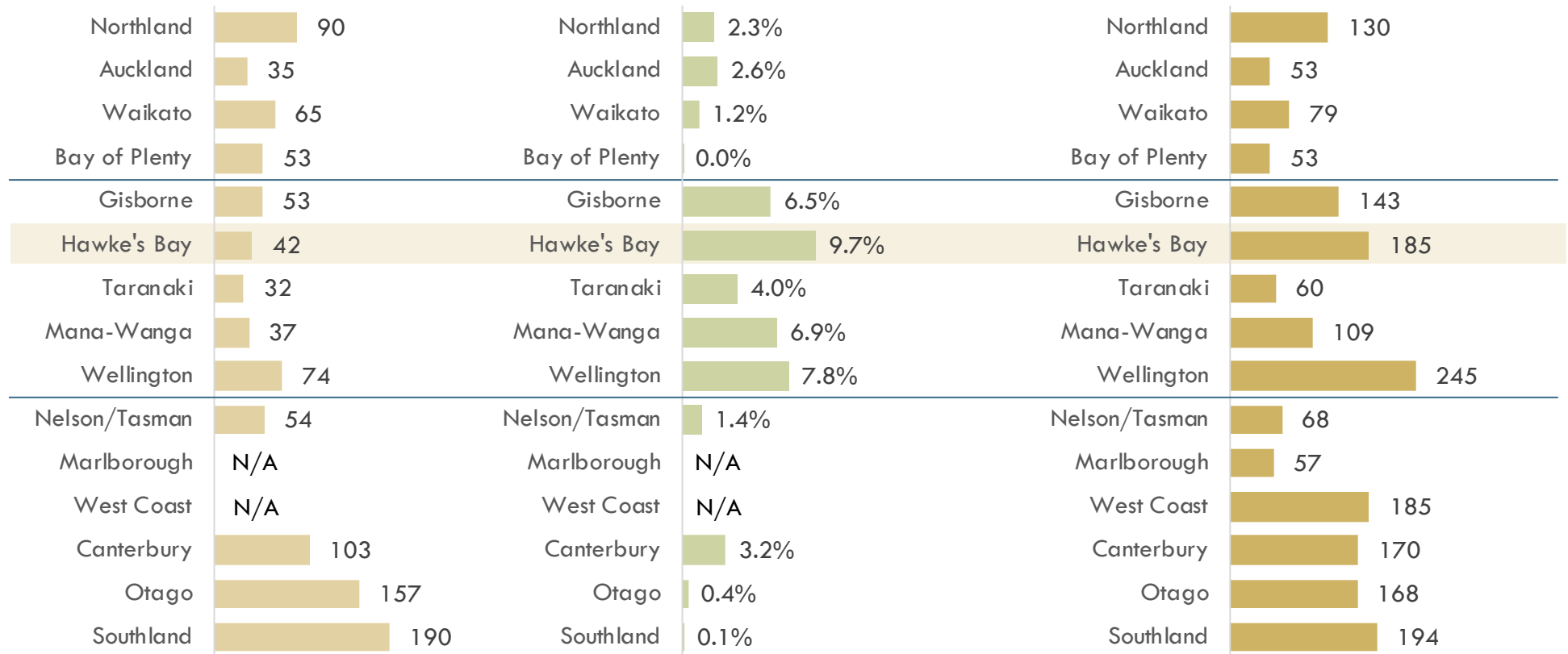
Region	Units; 2002	16Y Unit Change (CAGR) %; 02vs18	Units; 2018
Northland	24	6.8%	69
Auckland	42	3.9%	78
Waikato	177	6.1%	459
Bay of Plenty	96	1.4%	120
Gisborne	66	-2.8%	42
Hawke's Bay	87	0.0%	87
Taranaki	24	11.8%	144
Mana-Wanga	219	-0.2%	213
Wellington	48	1.7%	63
Nelson/Tasman	36	4.7%	75
Marlborough	54	-1.1%	45
West Coast	6	9.1%	24
Canterbury	1,338	-0.3%	1,275
Otago	126	4.6%	258
Southland	123	5.0%	267

# Average crop farm sizes are growing

**AVERAGE CROP FARM SIZE**  
Ha/unit; 2002

**16Y SIZE GROWTH (CAGR)**  
%; 02vs18

**AVERAGE CROP FARM SIZE**  
Ha/unit; 2018\*



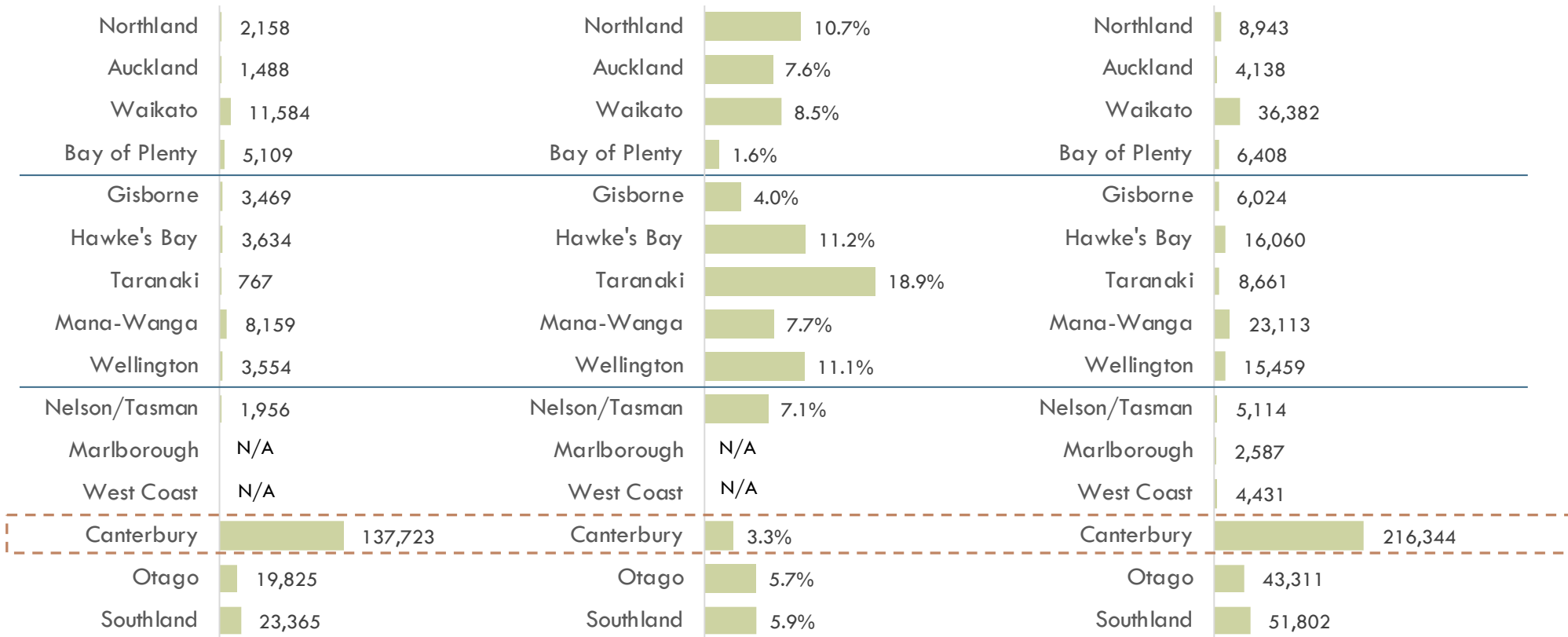
\*Uses 2016 area over 2018 farm numbers (for data reasons); Source: Statistics NZ; Ministry for the Environment; Coriolis analysis

# Total crop area is growing across all regions

## CROP HECTARES Ha; 2002

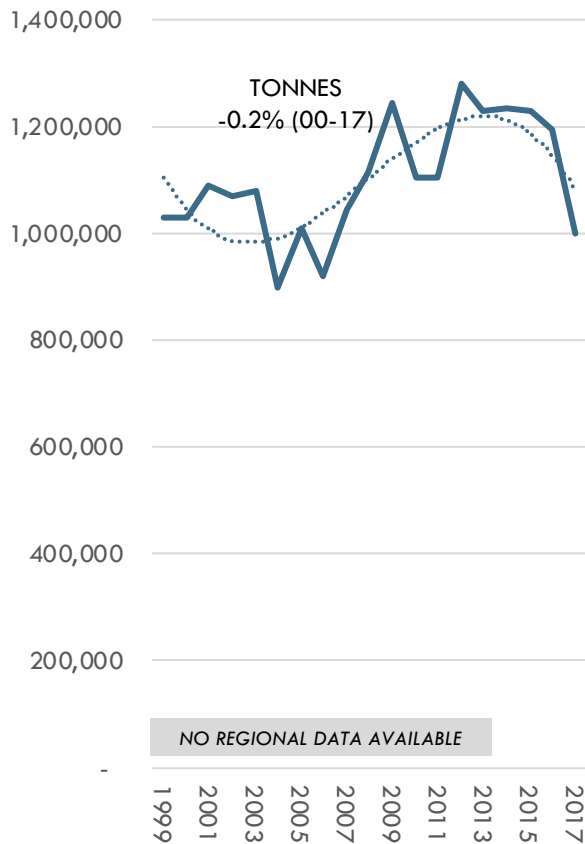
## 14Y GROWTH (CAGR) CAGR; 02vs16

## CROP HECTARES Ha; 2016

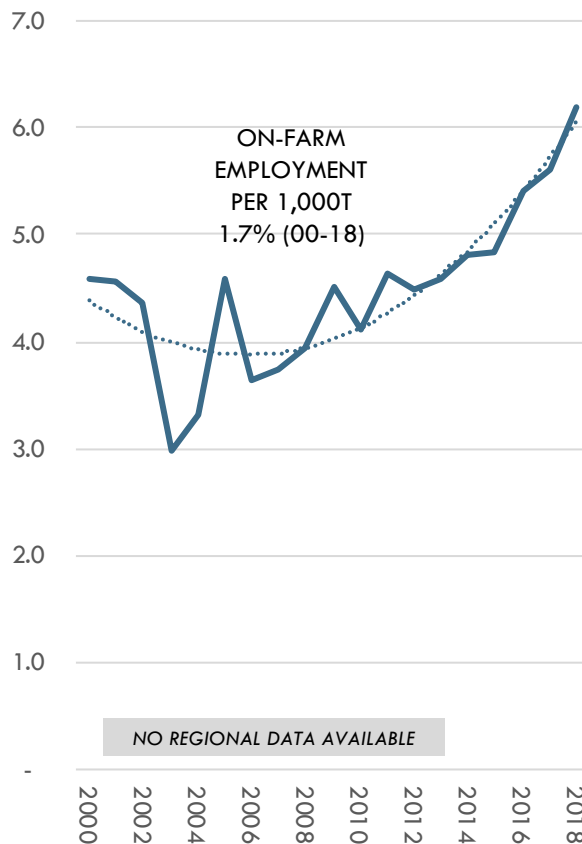


# On-farm employment in crops is growing

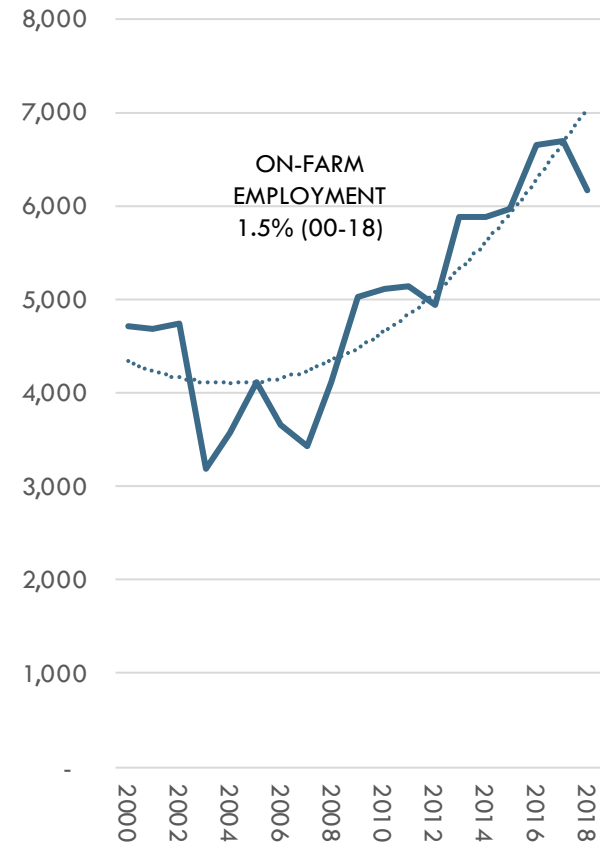
**TONNES: CROPS**  
T; 1999-2017



**EMPLOYMENT/1,000T**  
Headcount/1,000t; 2000-2018



**EMPLOYMENT**  
Headcount; 2000-2018



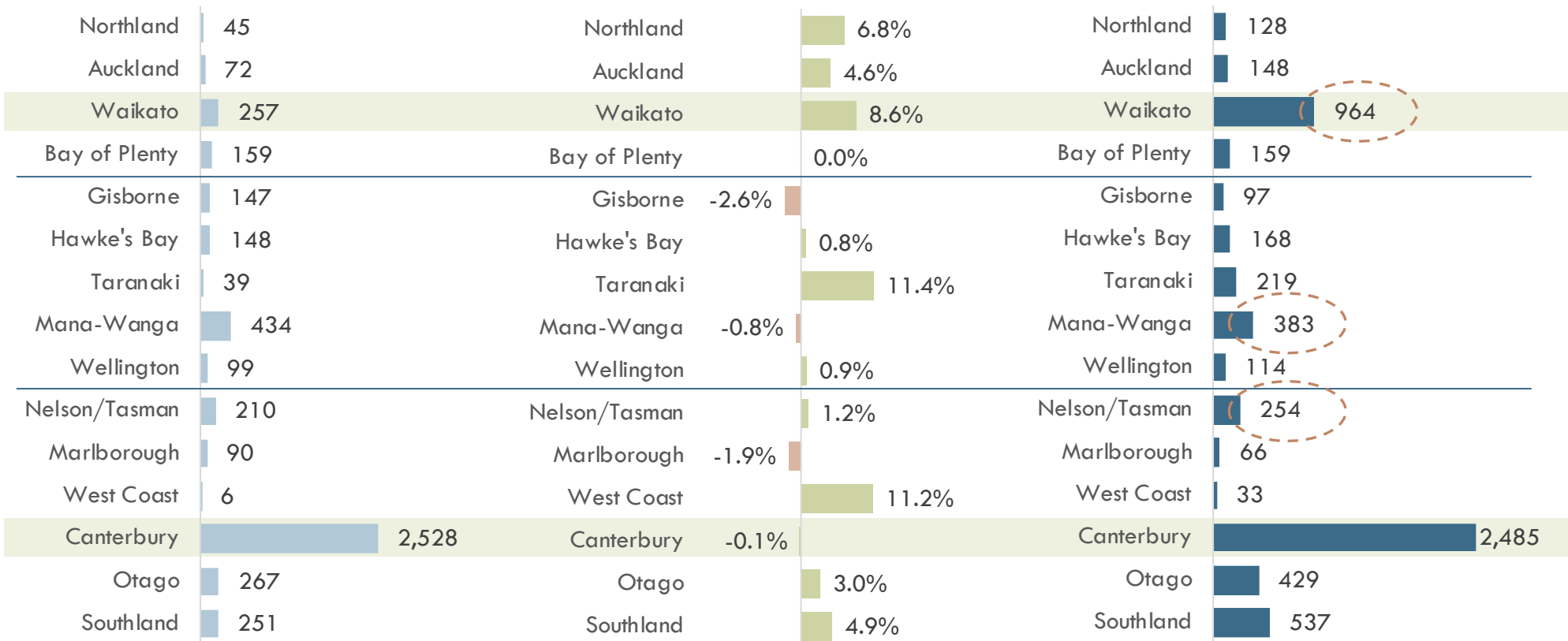
Caution: Will not agree with totals elsewhere; caution against double counting (e.g. grain and cattle/sheep); Source: Statistics NZ; UN FAO; MAF/MPI; Coriolis analysis

# Crop farms are creating employment across many regions

**ON-FARM EMPLOYMENT 2002**  
Headcount; 2002

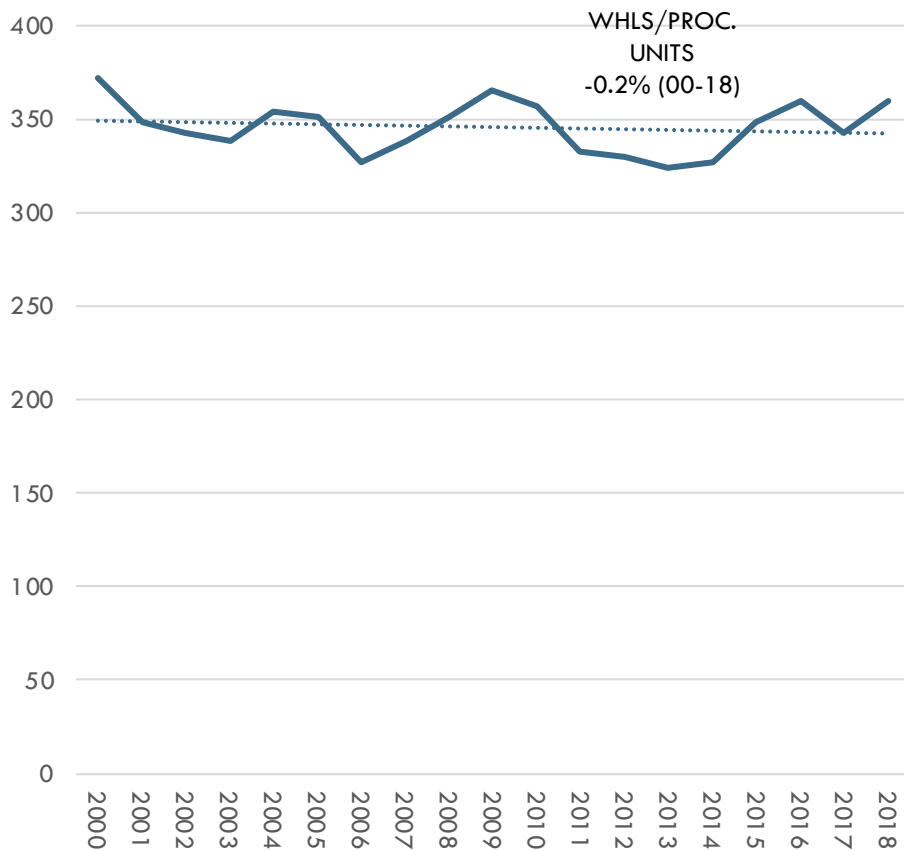
**16Y CHANGE (CAGR)**  
%; 02vs18

**ON-FARM EMPLOYMENT 2018**  
Headcount; 2018

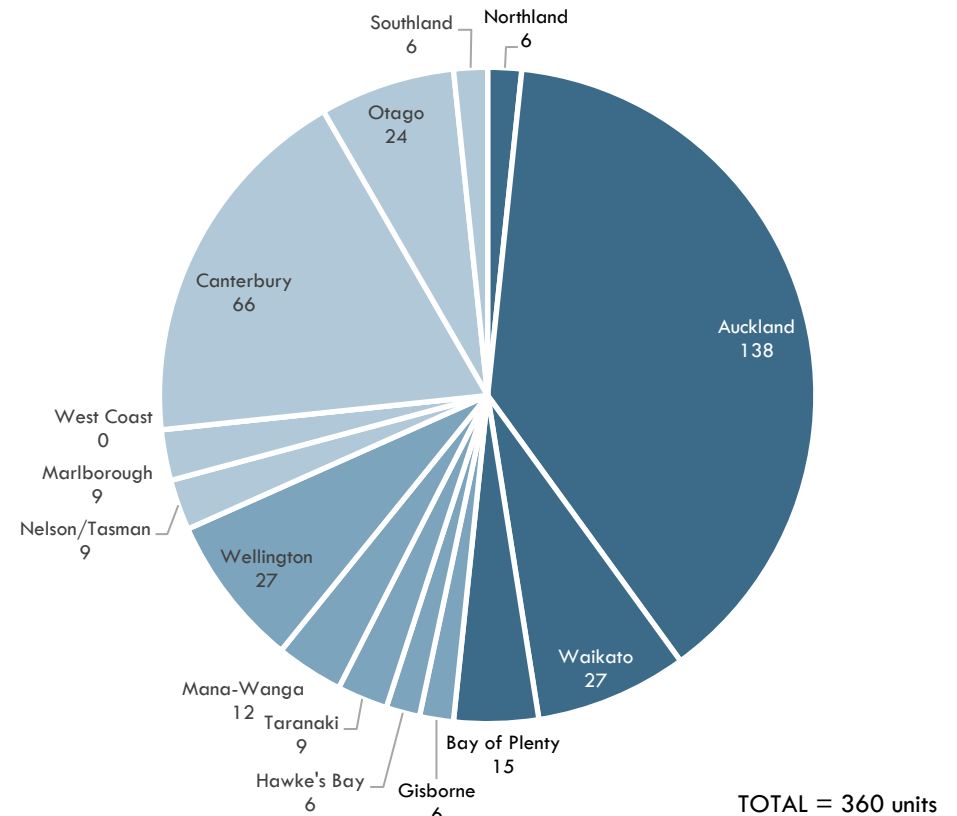


# Turning to processing/wholesaling, units are located primarily in Auckland and Canterbury, with overall numbers flat to declining

**GRAIN PROCESSING/WHOLESALE**  
Geographic units; 2000-2018



**GRAIN PROC/WHLS BY REGION**  
Geographic units; 2018



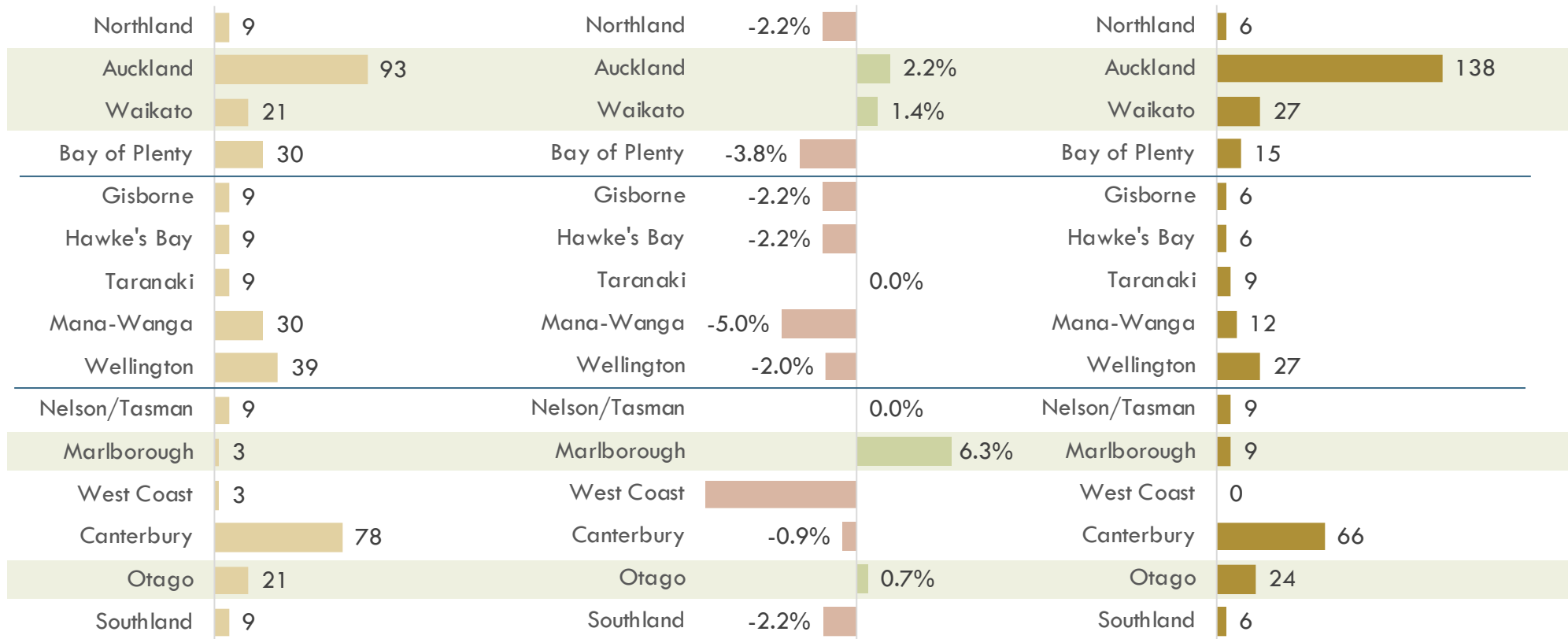
Source: Statistics NZ; Coriolis analysis

# Grain processors and wholesalers numbers are growing in Auckland, Waikato, Marlborough and Otago; shrinking elsewhere

**OPERATIONS IN 2000**  
Geographic units; 2000

**18Y UNIT CHANGE (CAGR)**  
%; 00vs18

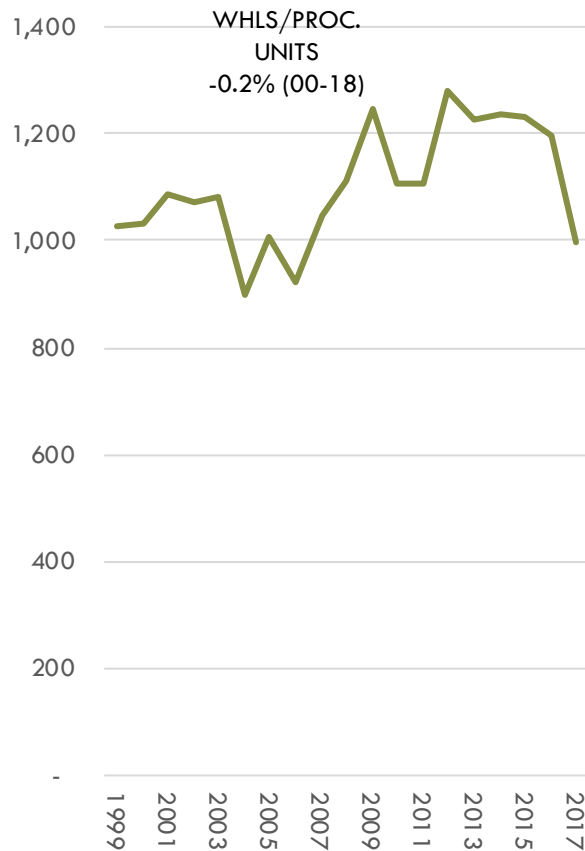
**OPERATIONS IN 2018**  
Geographic units; 2018



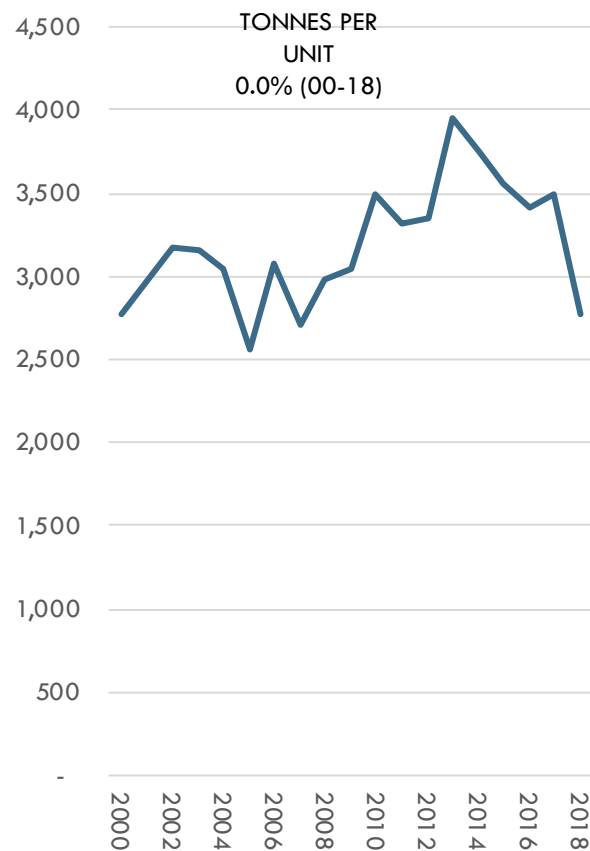


# Overall, New Zealand is seeing limited change in the number of grain processing and wholesaling units

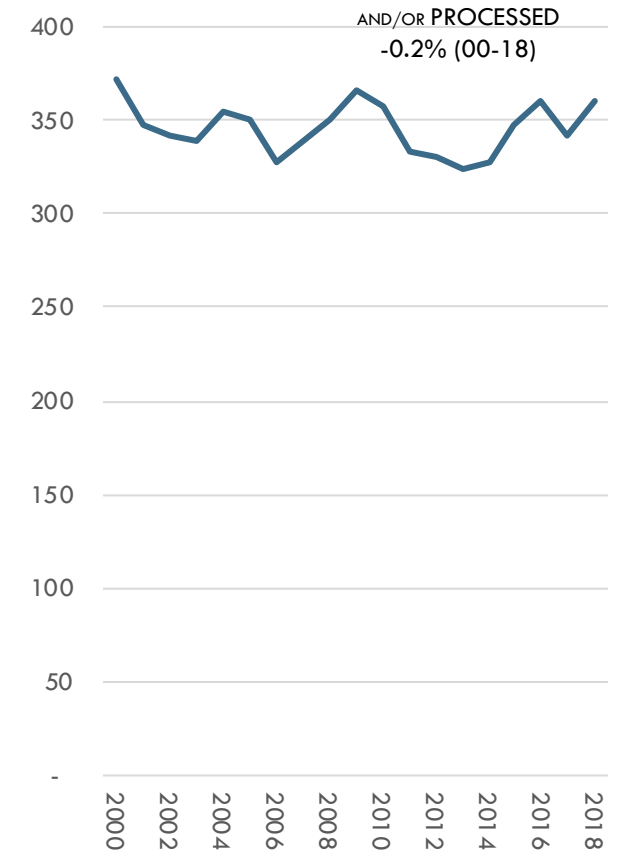
# OF GRAIN PROC/WHLS Units; 2000-2018



TONNES/PROC/WHLS UNIT T/geographic unit; 2000-2018\*



TONNES OF MARKET CROPS T; 000; 1999-2017

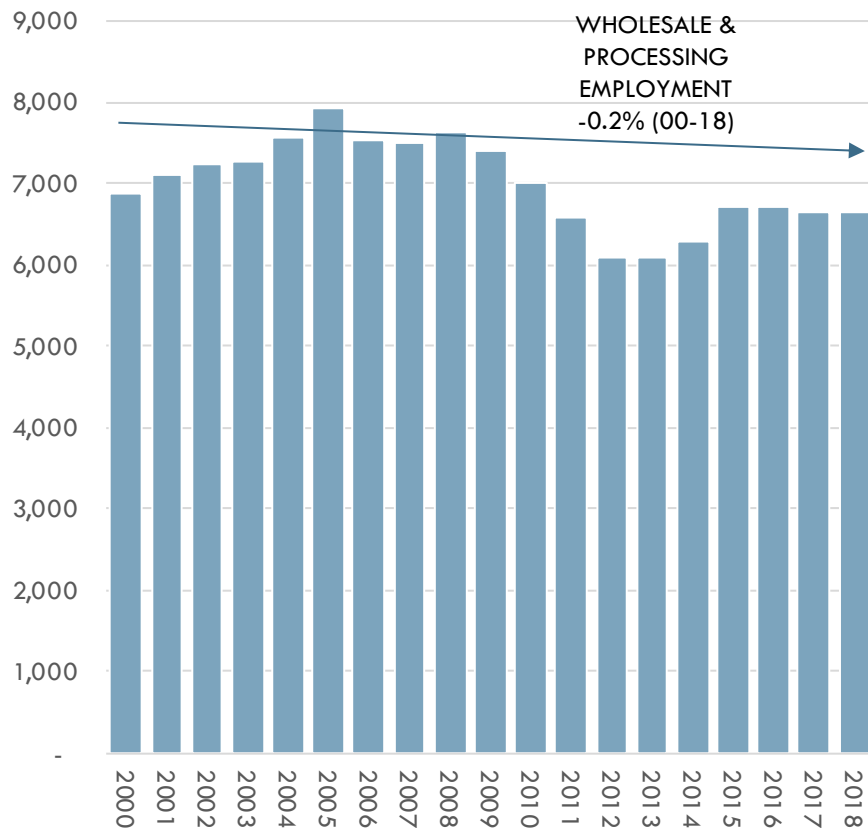


\*Uses 2017 volume over 2018 units (for data related reasons); Source: Statistics NZ; UN FAO; MAF/MPI; Coriolis analysis

# Grain processors/wholesalers jobs are predominantly in Auckland and Canterbury and employment is not growing

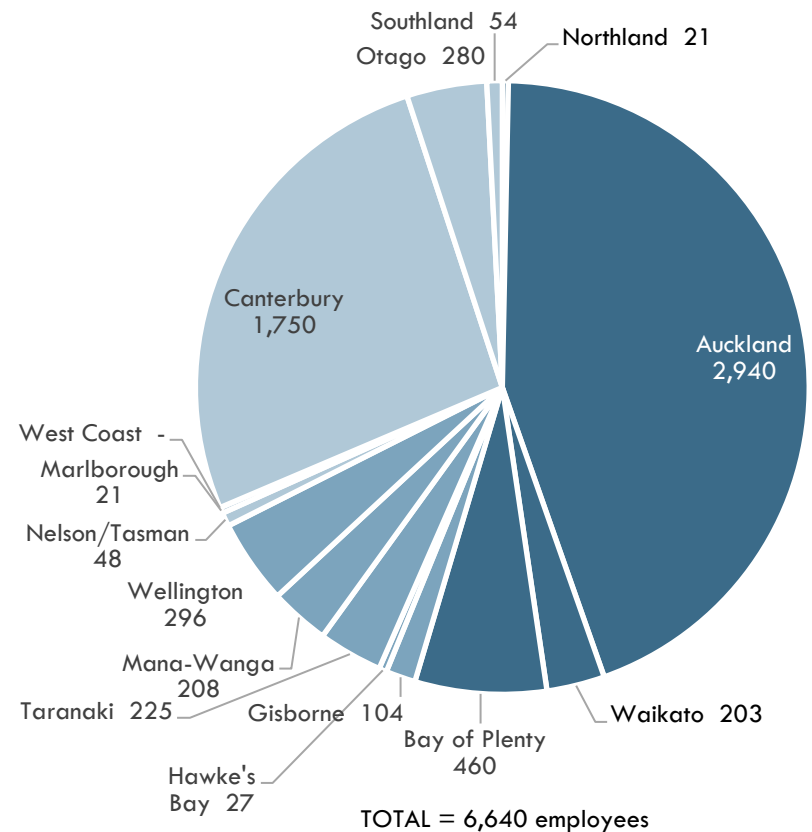
## GRAIN PROC/WHLS EMPLOYMENT

Headcount; 2000-2018



## GRAIN PROC/WHLS EMPLOYMENT

Headcount; 2018

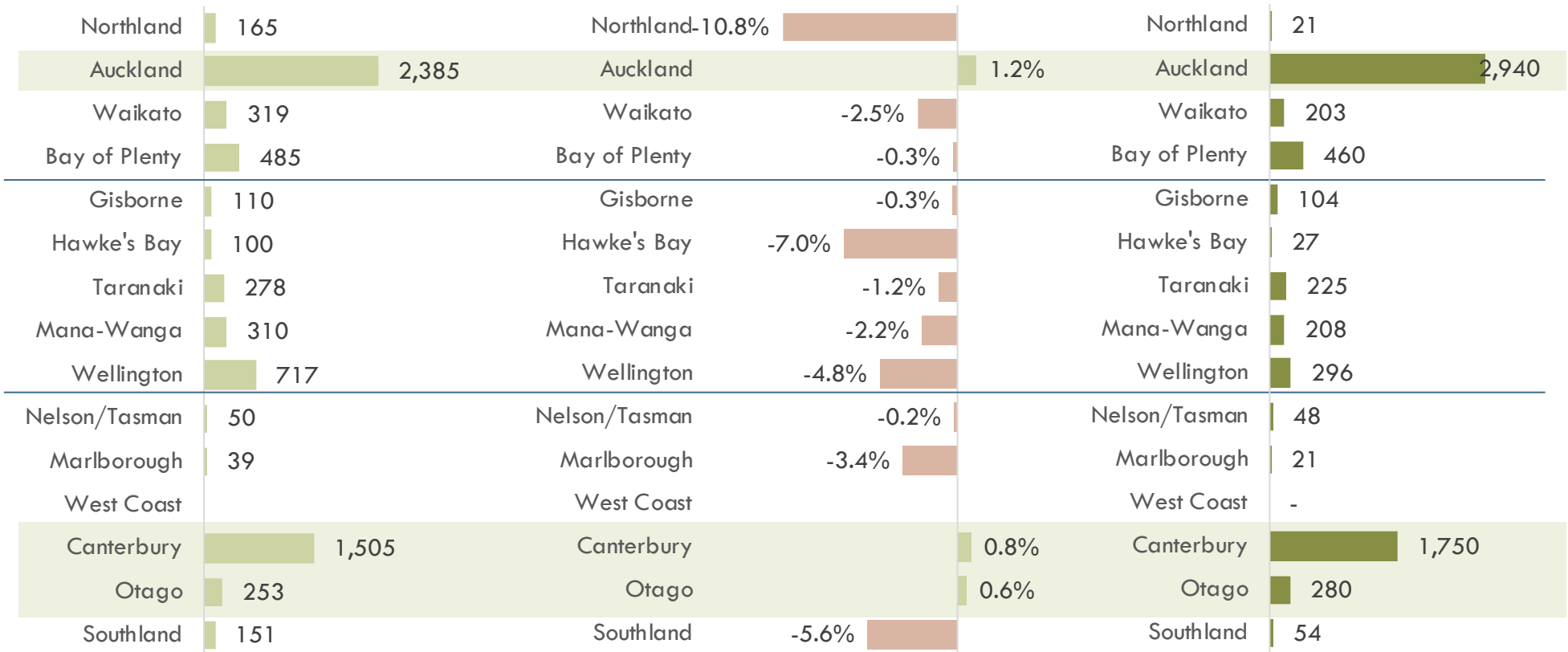


# Mild overall decline masks regional shifts, with Auckland, Canterbury and Otago growing jobs while all others are declining

**EMPLOYMENT 2000**  
Headcount; 2000

**18Y CHANGE (CAGR)**  
Headcount; 00vs18

**EMPLOYMENT 2018**  
Headcount; 2018



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## *SUMMARY FINDINGS: New Zealand has growing processed foods employment*

- 'Processed foods' captures a wide range of products that are made from a combination of ingredients
- Overall, the number of processed foods manufacturing operations is growing and units are spread across the country
- All regions (other than Gisborne) are creating significant numbers of new geographic units
- The rapid growth of new processing operations is driving down average employment per unit, but growing total employment
  - Employment per unit change varies across regions, but the industry is still primarily small firms (12 employees average)
- Processed foods firms are creating jobs; however, jobs are currently concentrated in Auckland
- Employment growth varies by region; Northland, Hawke's Bay, Wellington and Nelson/Tasman achieving high growth rates

# 'Processed foods' captures a wide range of products that are made from a combination of ingredients

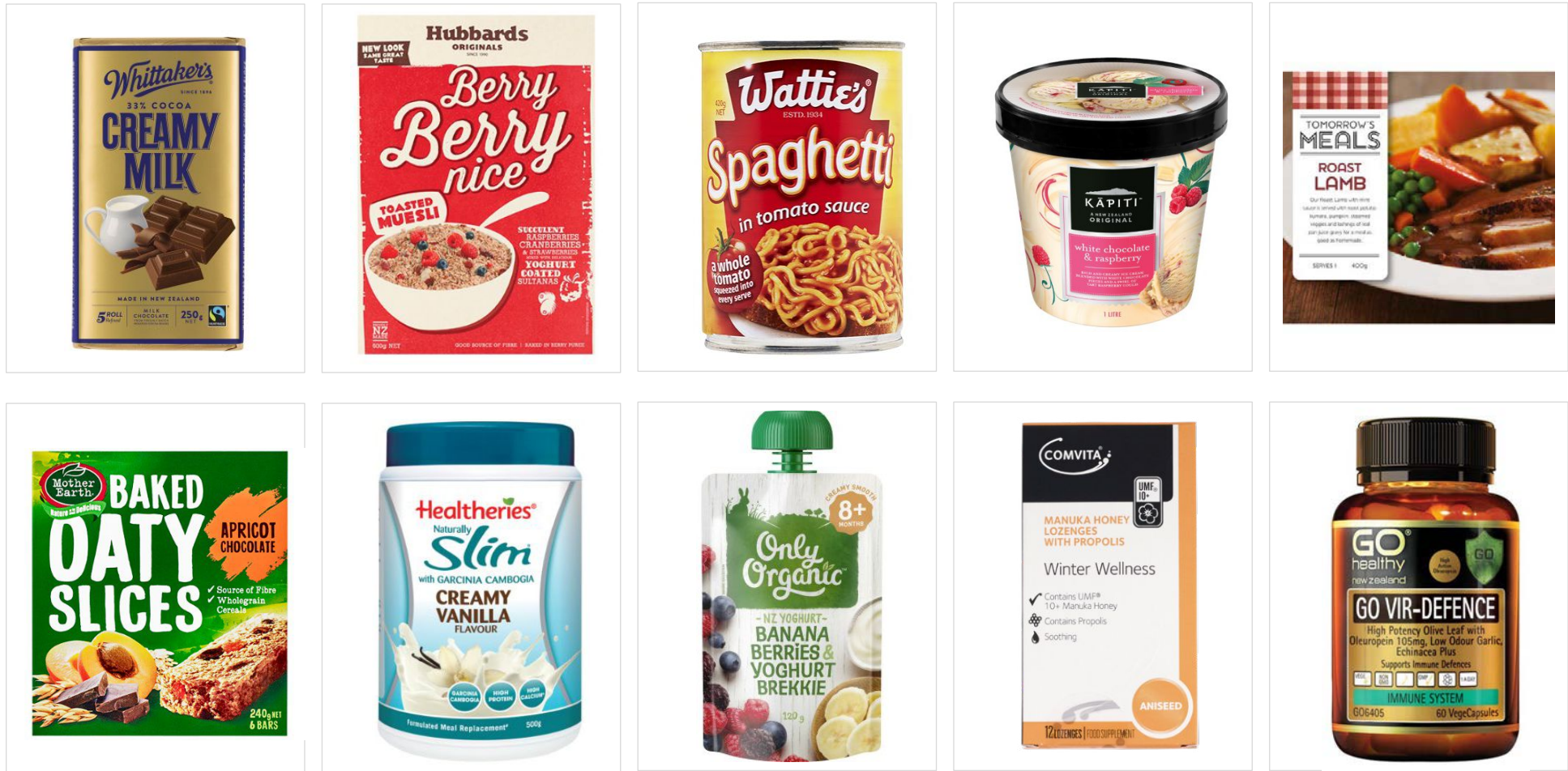
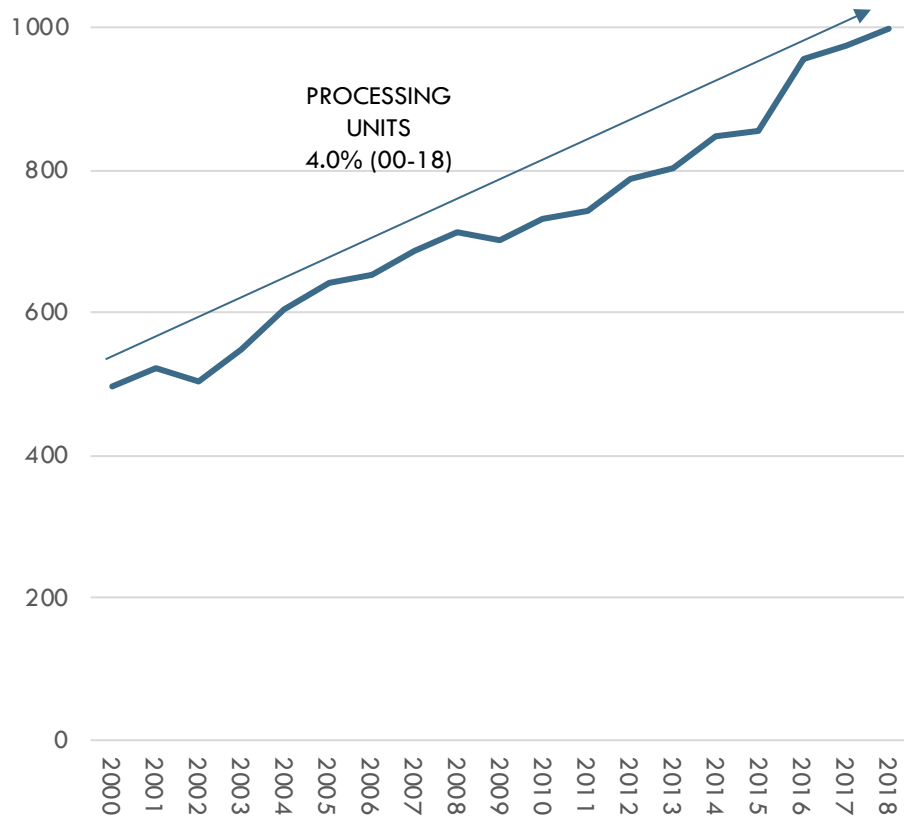


Photo credit: various firms or fair use; low resolution; complete product/brand for illustrative purposes; Source: Coriolis analysis

# Overall, the number of processed foods manufacturing operations is growing and units are spread across the country

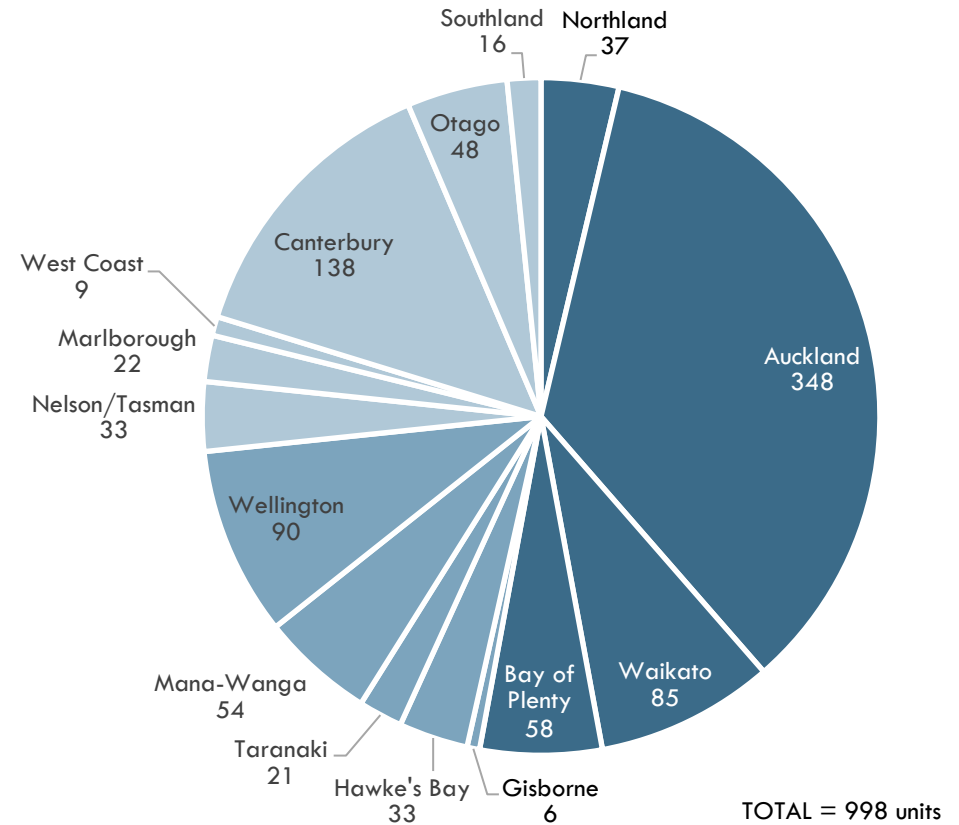
## PROCESSED FOODS UNITS

Geographic units; 2000-2018



## PROCESSED FOODS UNITS BY REGION

Geographic units; 2018



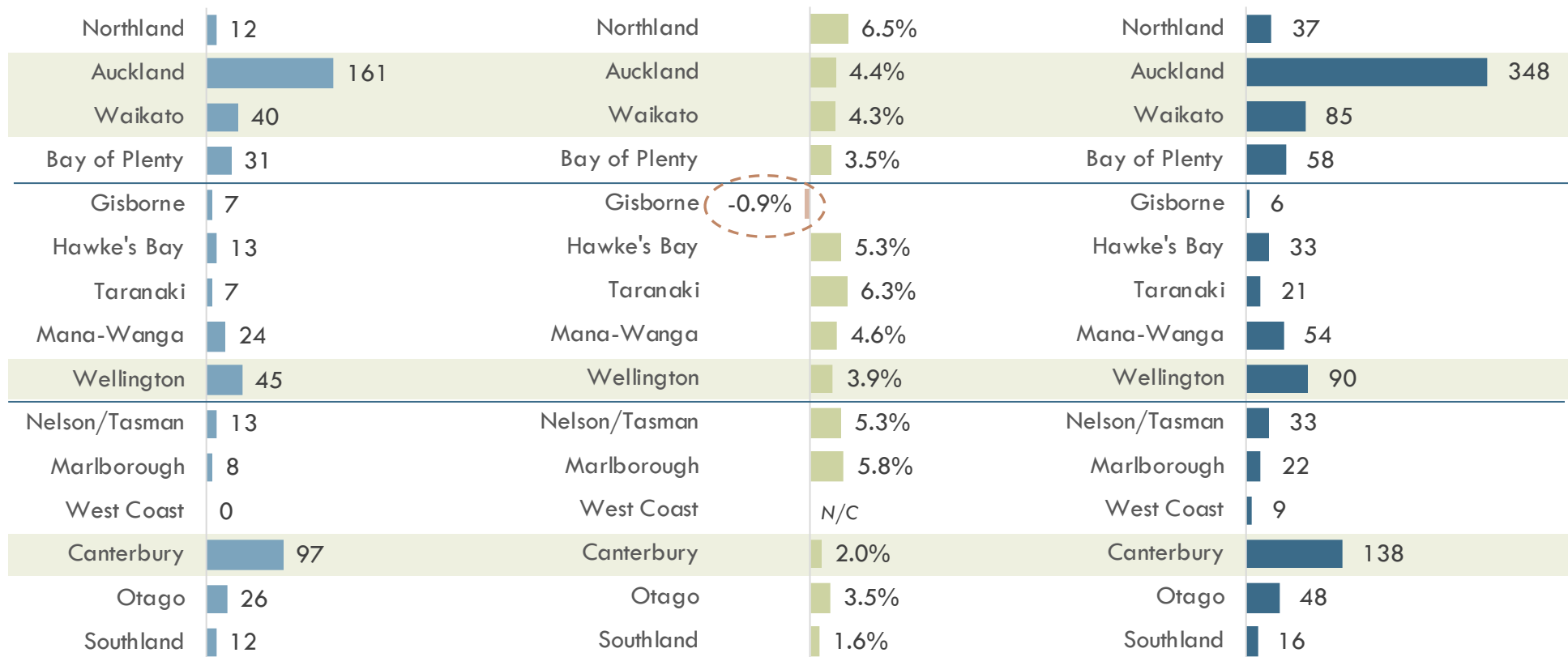
Note: Excludes wineries and dairy based beverages; Source: Statistics NZ; Coriolis analysis

# All regions (other than Gisborne) are creating significant numbers of new geographic units

**OPERATIONS IN 2000**  
Geographic units; 2000

**18Y UNIT GROWTH (CAGR)**  
%; 00vs18

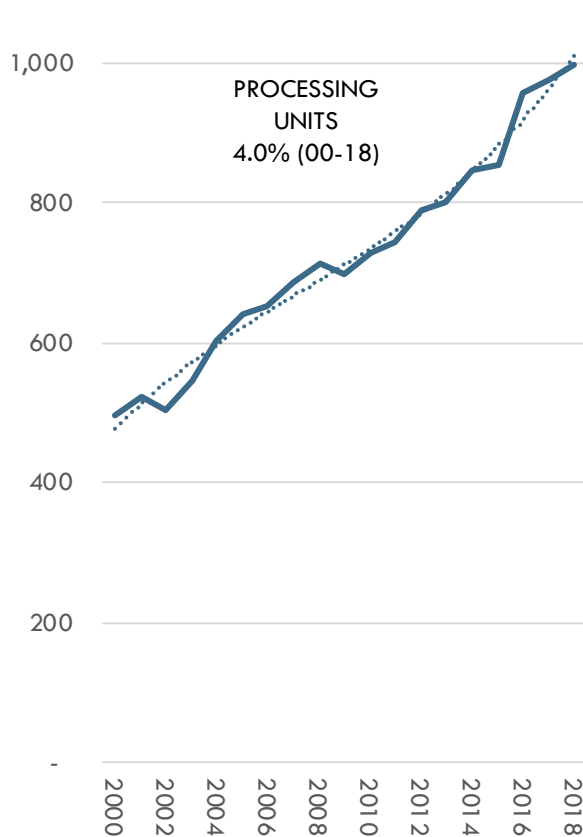
**OPERATIONS IN 2018**  
Geographic units; 2018



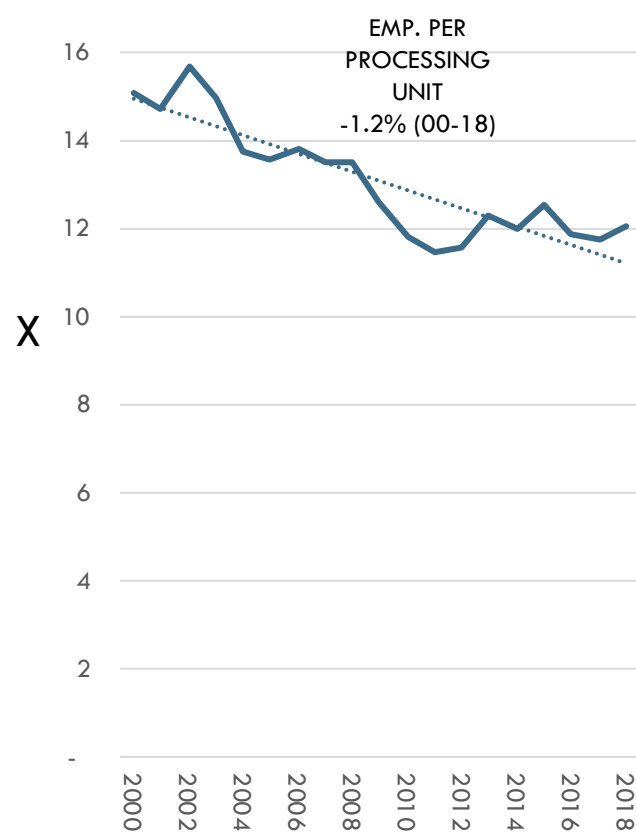


# The rapid growth of new processing operations is driving down average employment per unit, but growing total employment

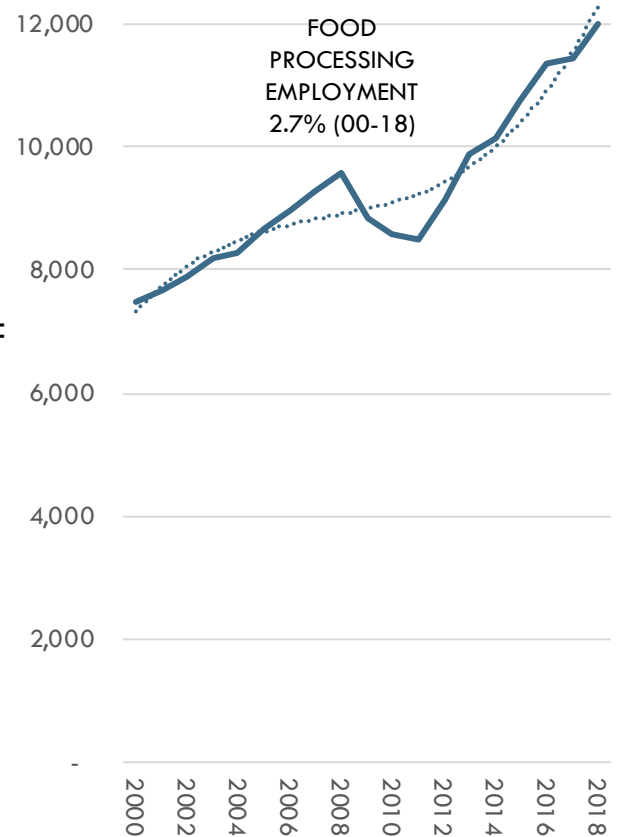
**PROCESSED UNITS**  
Geographic units; 2000-2018



**JOBS/UNIT**  
Headcount/unit; 2000-2018



**TOTAL EMPLOYMENT**  
Headcount; 2000-2018



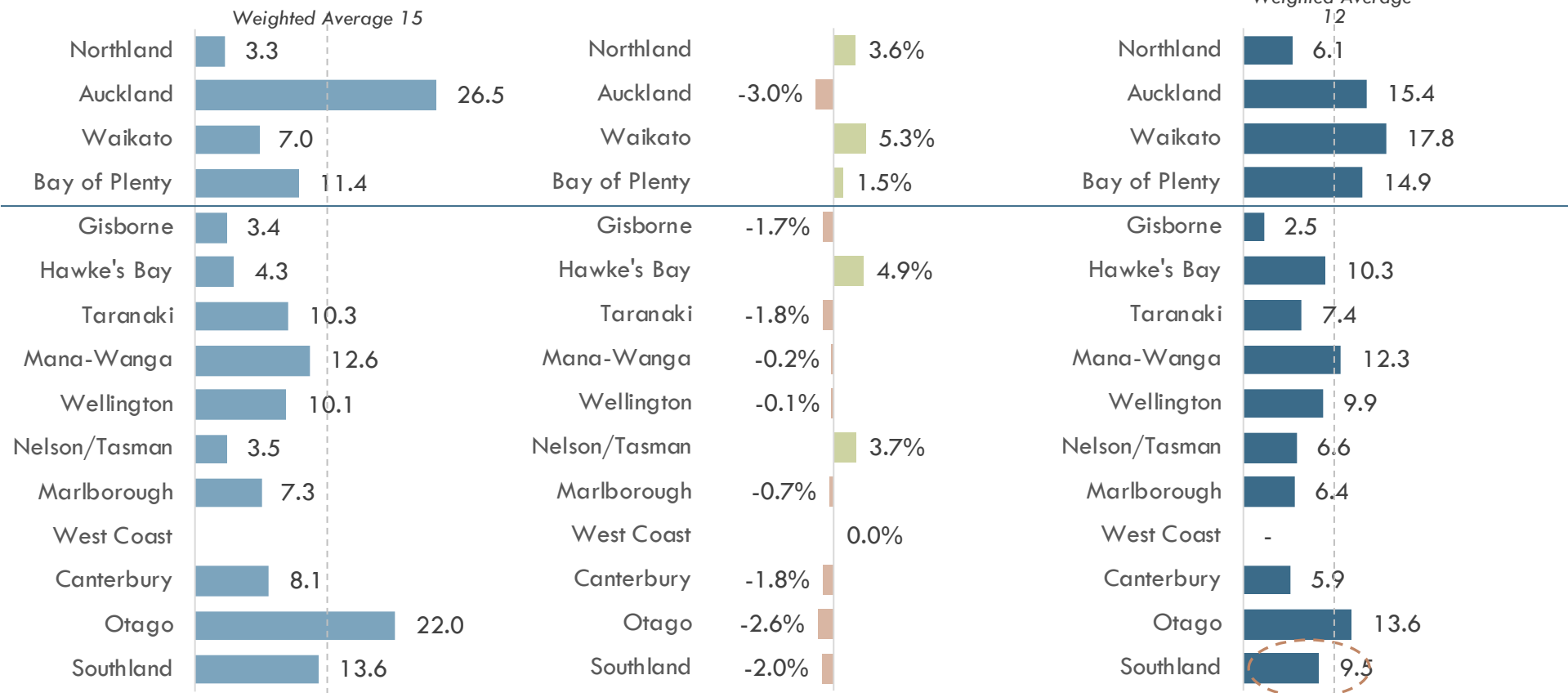
X =

# Employment per unit change varies across regions, but the industry is still primarily small firms (12 employees average)

**EMPLOYMENT/UNIT 2000**  
Headcount/units; 2000

**18Y GROWTH (CAGR)**  
%; 00vs18

**EMPLOYMENT/UNIT 2018**  
Headcount/units; 2018

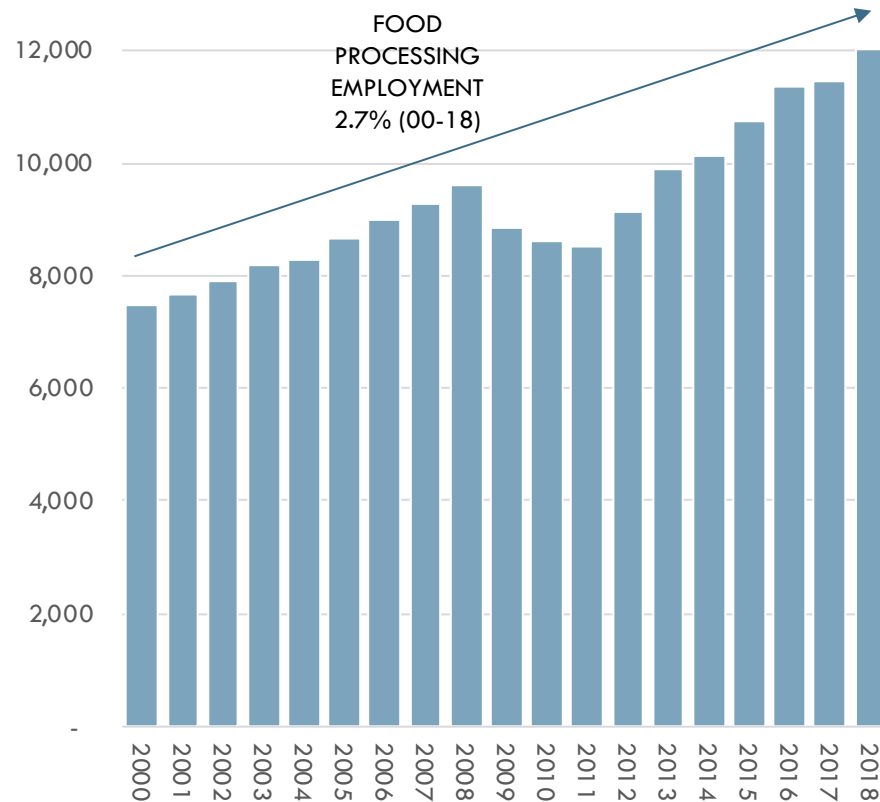


Note: the West Coast's nine processed foods operations appear to only have non-employee 'owner operators'; Source: Statistics NZ; Coriolis analysis

# Processed foods firms are creating jobs; however, jobs are currently concentrated in Auckland

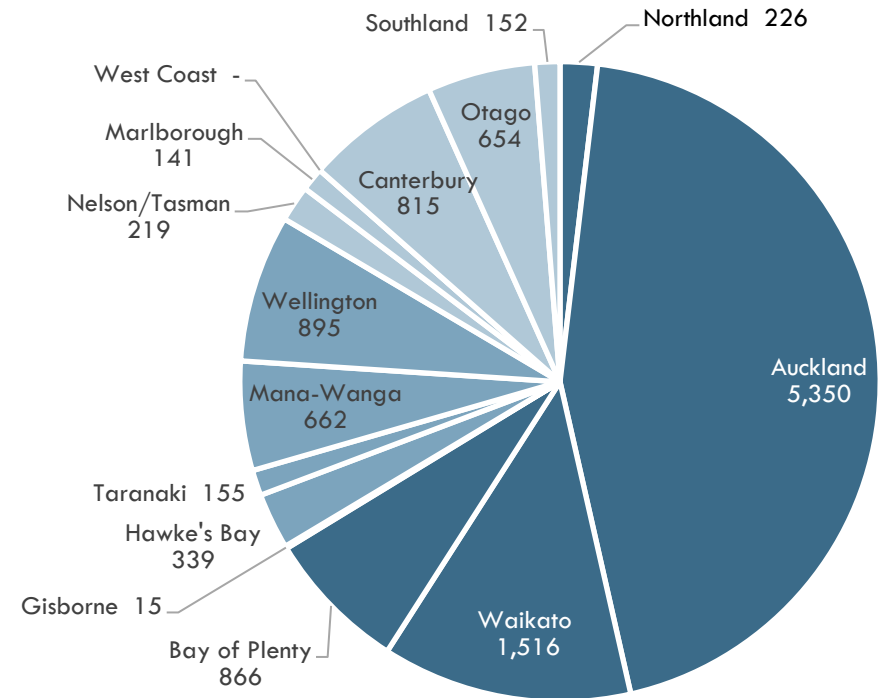
## PROCESSING EMPLOYMENT

Headcount; 2000-2018



## PROCESSING EMPLOYMENT

Headcount; 2018



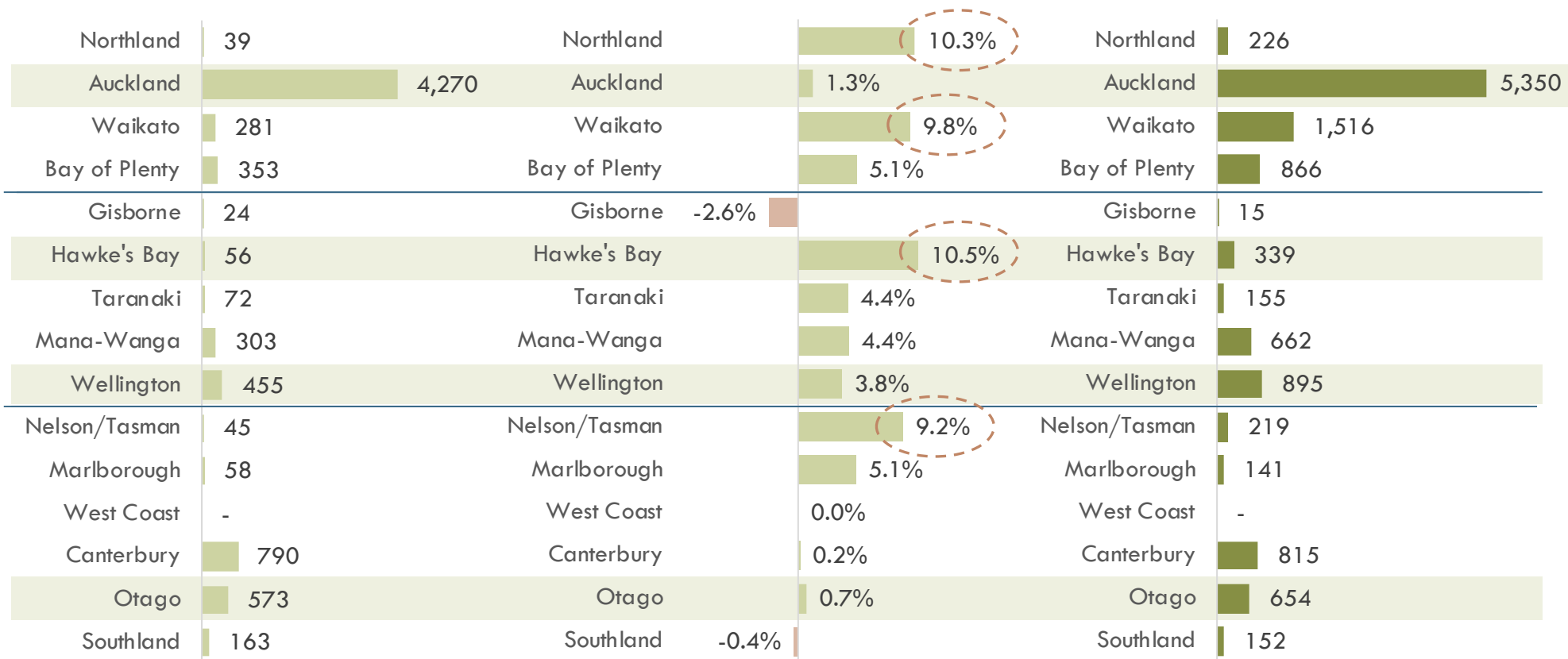
TOTAL = 12,005 processed foods employees

# Employment growth varies by region; Northland, Hawke's Bay, Wellington and Nelson/Tasman achieving high growth rates

**EMPLOYMENT 2000**  
Headcount; 2000

**18Y GROWTH (CAGR)**  
%; 00vs18

**EMPLOYMENT 2018**  
Headcount; 2018



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## *SUMMARY FINDINGS: New Zealand has growing wine employment overall*

### GRAPE PRODUCTION

- Average grape growing “geographic unit” size is growing, as is total hectares in grapes
- Regions differ in the number of new growing units they are creating
- Average yield has been growing across leading regions; mixed results elsewhere
- Total wine grape production is growing, driven primarily by Marlborough
- Growing production has counteracted falling employment per tonne, leading to relatively stable recent employment (~5,000)

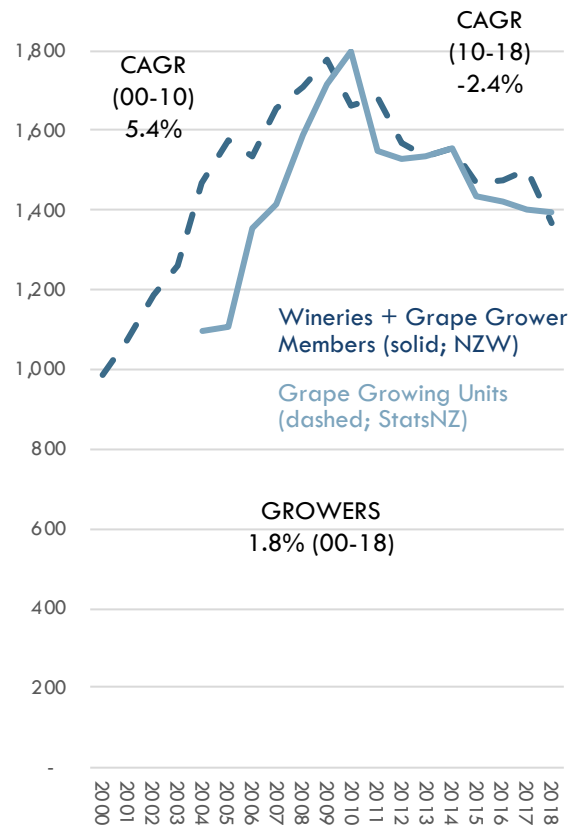
### WINE PROCESSING

- Turning to production, winery numbers are growing and wineries are spread across the country
- Regions vary in the number of new wineries they have created in the recent period
- Tonnes processed per winery is growing, though growth in scale is leading to fewer employees per tonne
- Performance varies by region, with Marlborough in particular moving to higher volume wineries
- Due to production growth, New Zealand wineries are creating jobs and jobs are spread across key wine regions
- Marlborough, Auckland, Hawke’s Bay, Otago and Canterbury are creating significant new wine processing employment

# Average grape growing “geographic unit” size is growing, as is total hectares in grapes

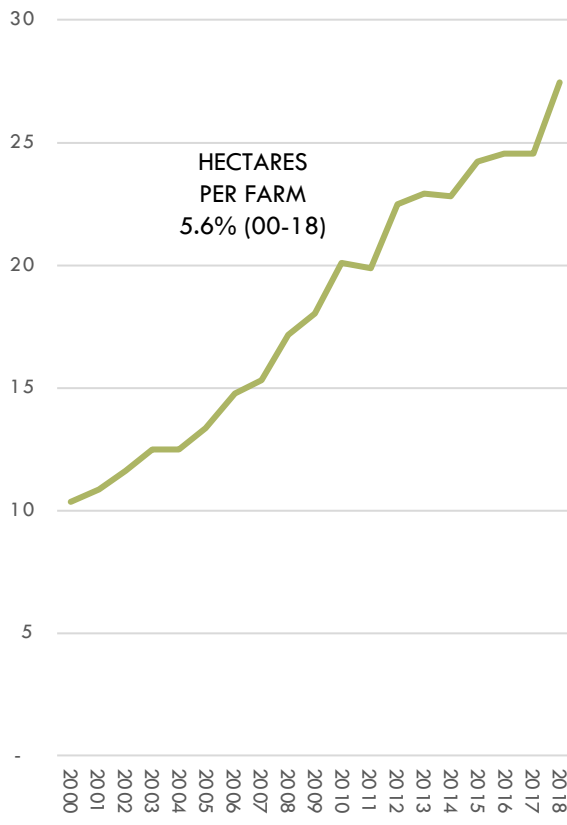
## # OF GROWING UNITS

Geographic units; 2000-2018



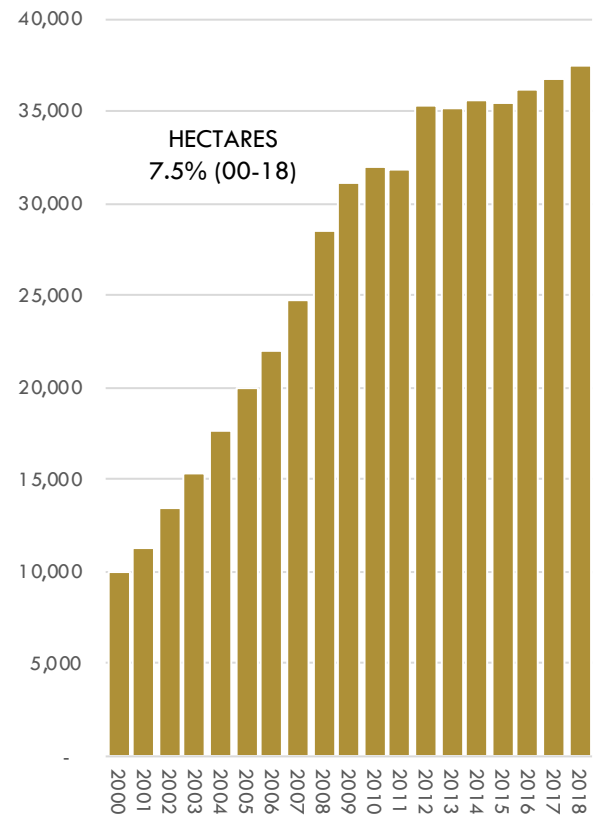
## HECTARES/UNIT

Ha/unit; 2000-2018



## HECTARES OF GRAPES

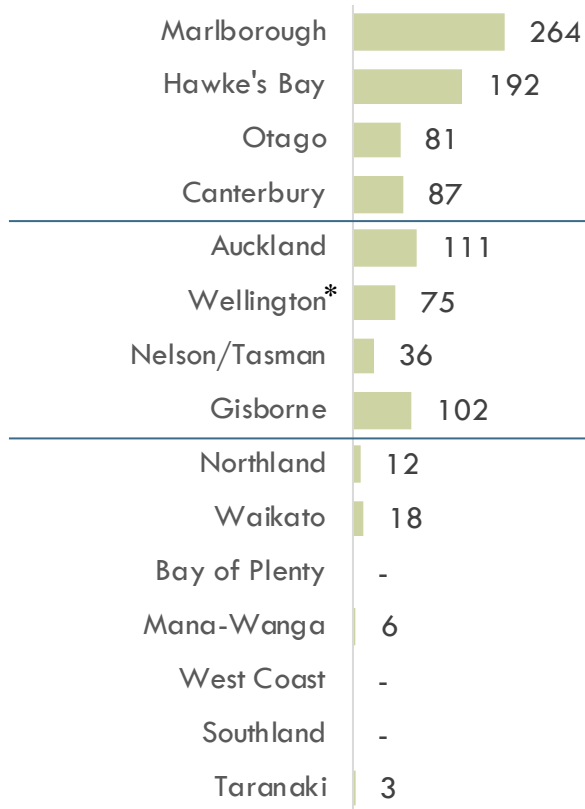
Ha; 2000-2018



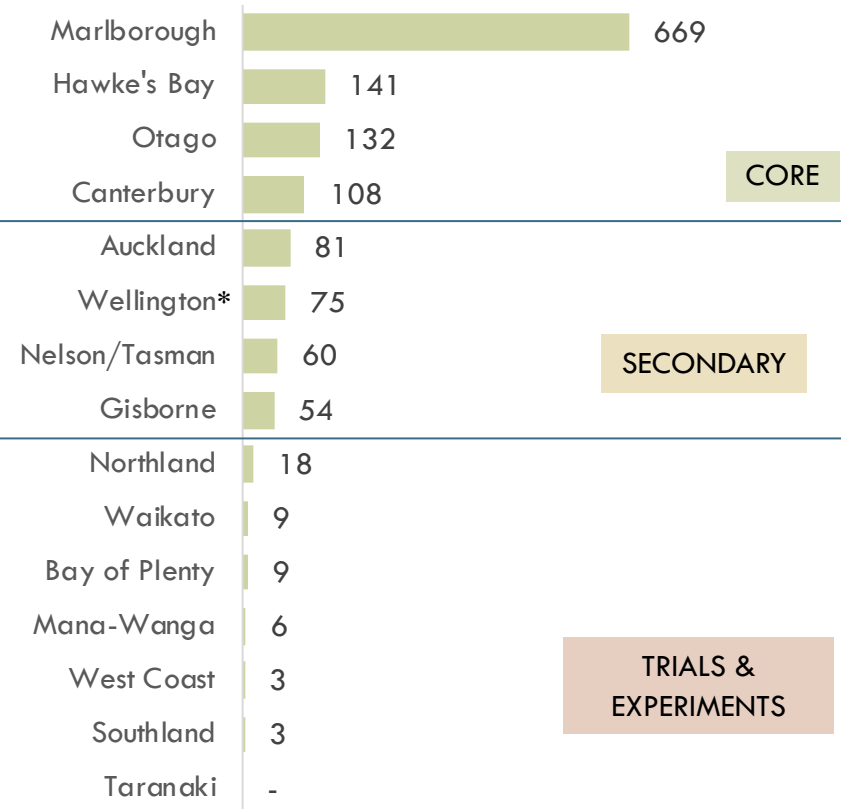
Note: NZW uses number of grape growers + wineries (on assumption that all wineries have some grapes somewhere); Source: Statistics NZ; UN FAO; MAF/MPI; New Zealand Winegrowers; Coriolis analysis

# Regions differ in the number of new growing units they are creating

**GRAPE GROWING UNITS**  
Units; 2000



**GRAPE GROWING UNITS**  
Units; 2018



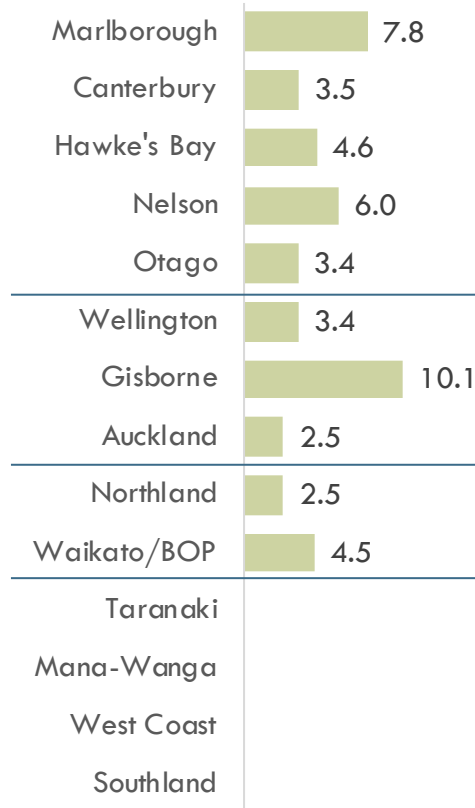
\*Primarily Wairarapa; Note: Southland appears to be operators with vineyards actually in Otago (?); we are not aware of any vineyards in Southland (Yet?); Source: Statistics NZ; New Zealand Winegrowers; Coriolis analysis



# Average yield has been growing across leading regions; mixed results elsewhere

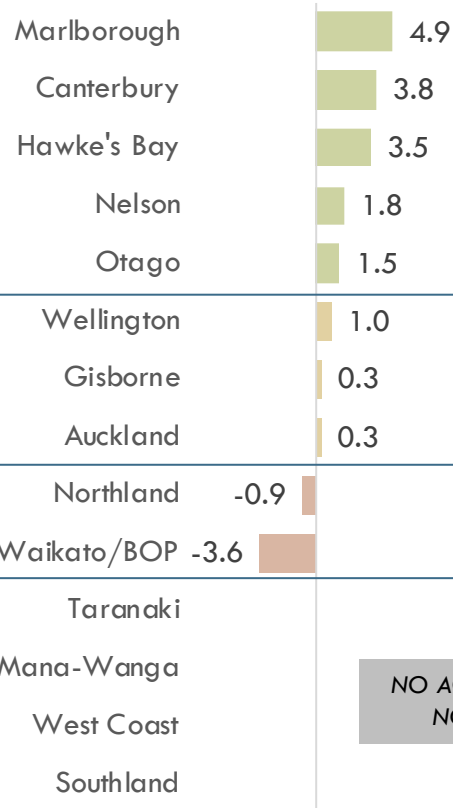
## GRAPE YIELD

T/ha; average 2001-2003



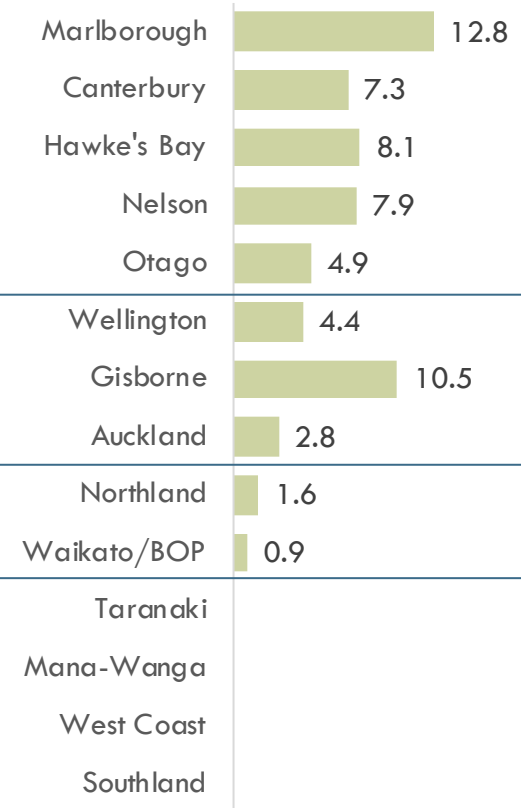
## 15Y YIELD CHANGE

T/ha; 01-03 vs 16-18



## GRAPE YIELD

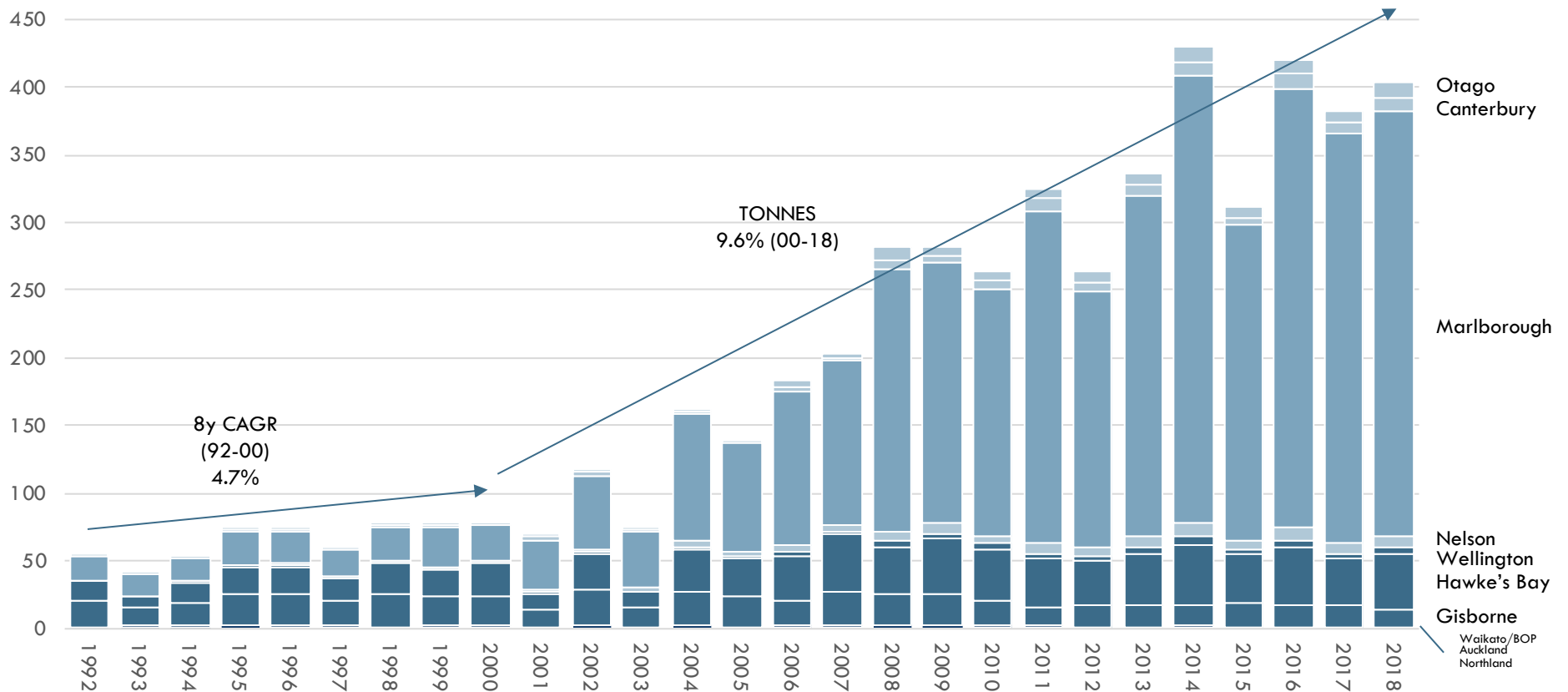
T/ha; average 2016-2018



NO ACTIVITY OR  
NO DATA

# Total wine grape production is growing, driven primarily by Marlborough

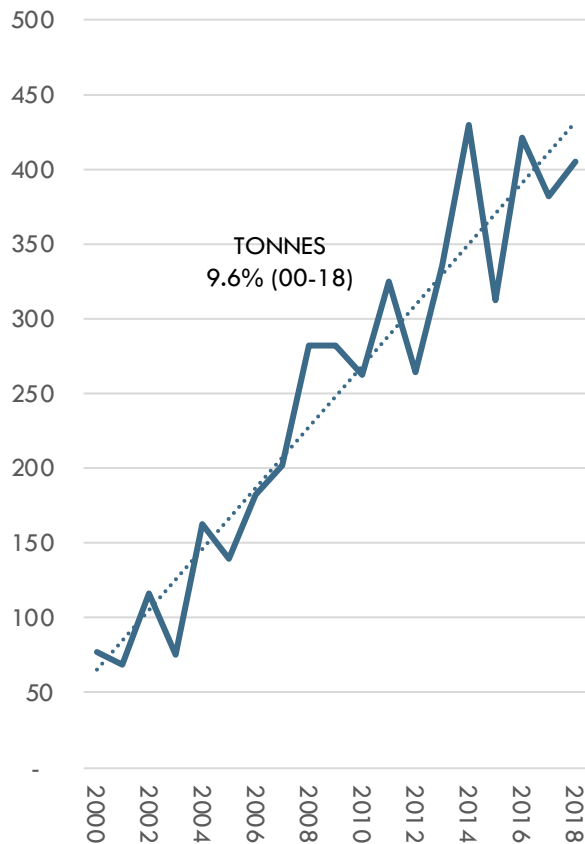
TOTAL NEW ZEALAND WINE GRAPE PRODUCTION  
T; 000; 1992-2018



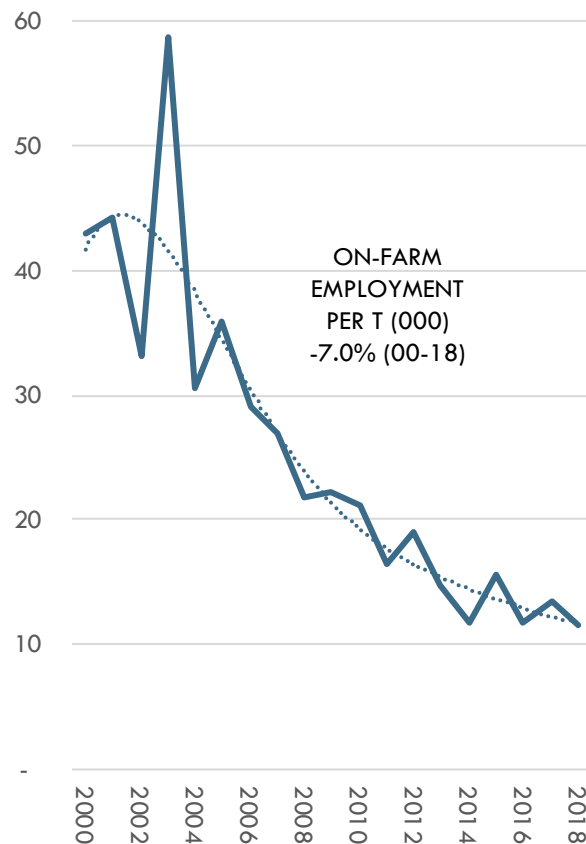
Source: Statistics NZ; UN FAO; MAF/MPI; New Zealand Winegrowers; Coriolis analysis

# Growing production has counteracted falling employment per tonne, leading to relatively stable recent employment (~5,000)

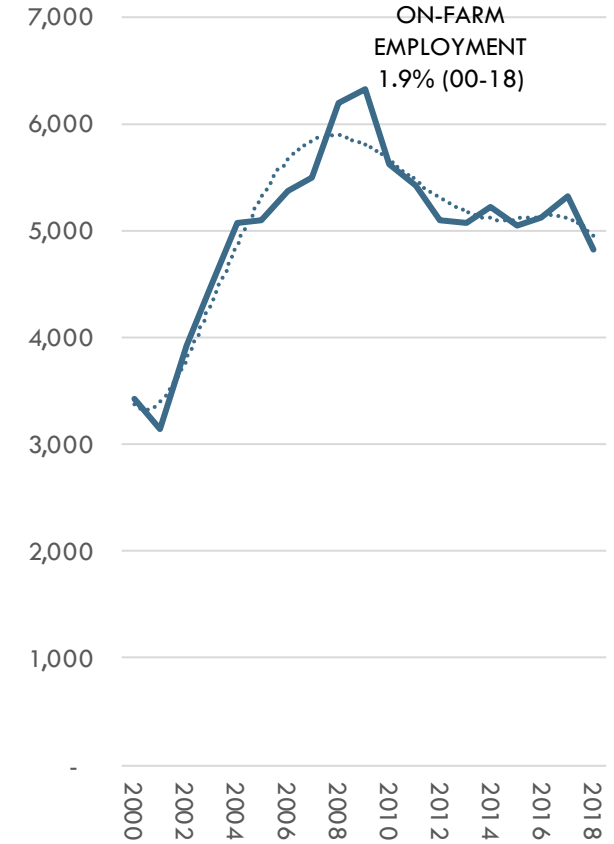
**TONNES**  
T; 000; 2000-2018



**EMPLOYMENT/1,000T**  
Headcount/1,000t; 2000-2018



**ON-FARM EMPLOYMENT**  
Headcount; 2000-2018

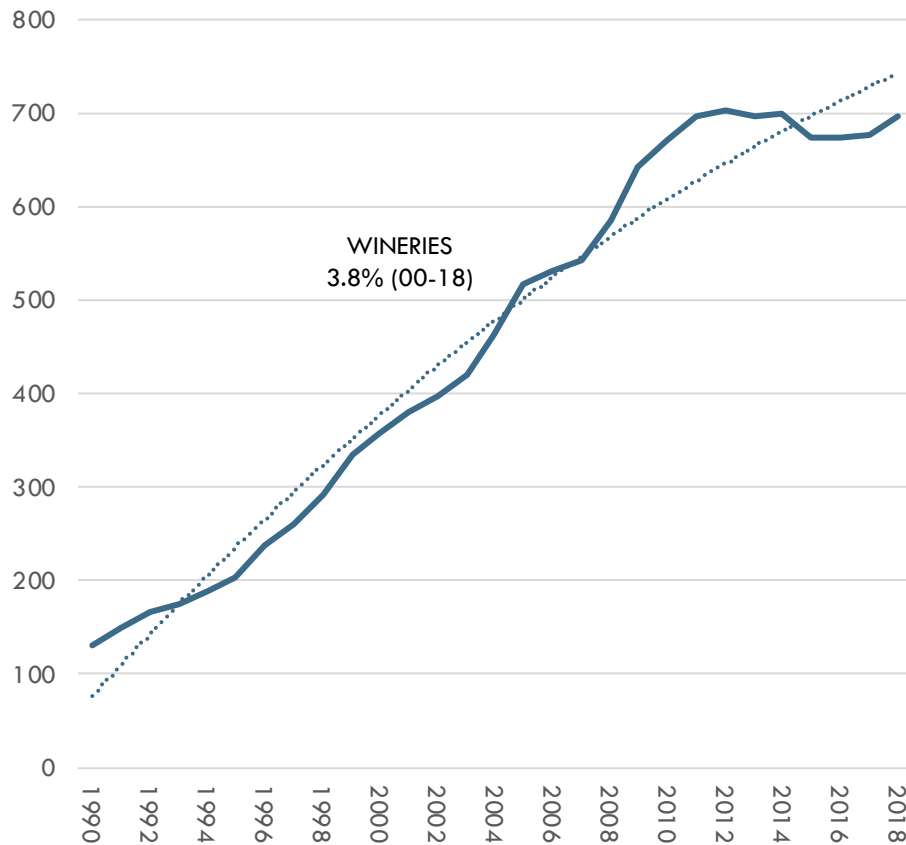


Source: Statistics NZ; UN FAO; MAF/MPI; New Zealand Winegrowers; Coriolis analysis

# Turning to production, winery numbers are growing and wineries are spread across the country

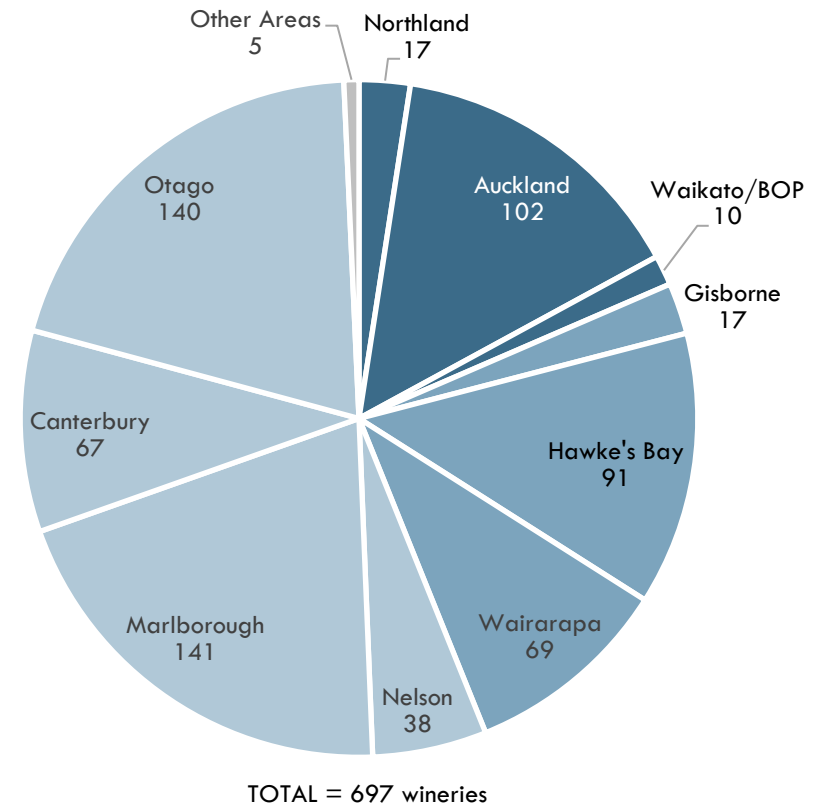
## WINERIES IN NEW ZEALAND

NZW members; 1990-2018



## WINERIES IN NEW ZEALAND BY REGION

NZW members; 2018



# Regions vary in the number of new wineries they have created in the recent period

## WINERIES IN 2011

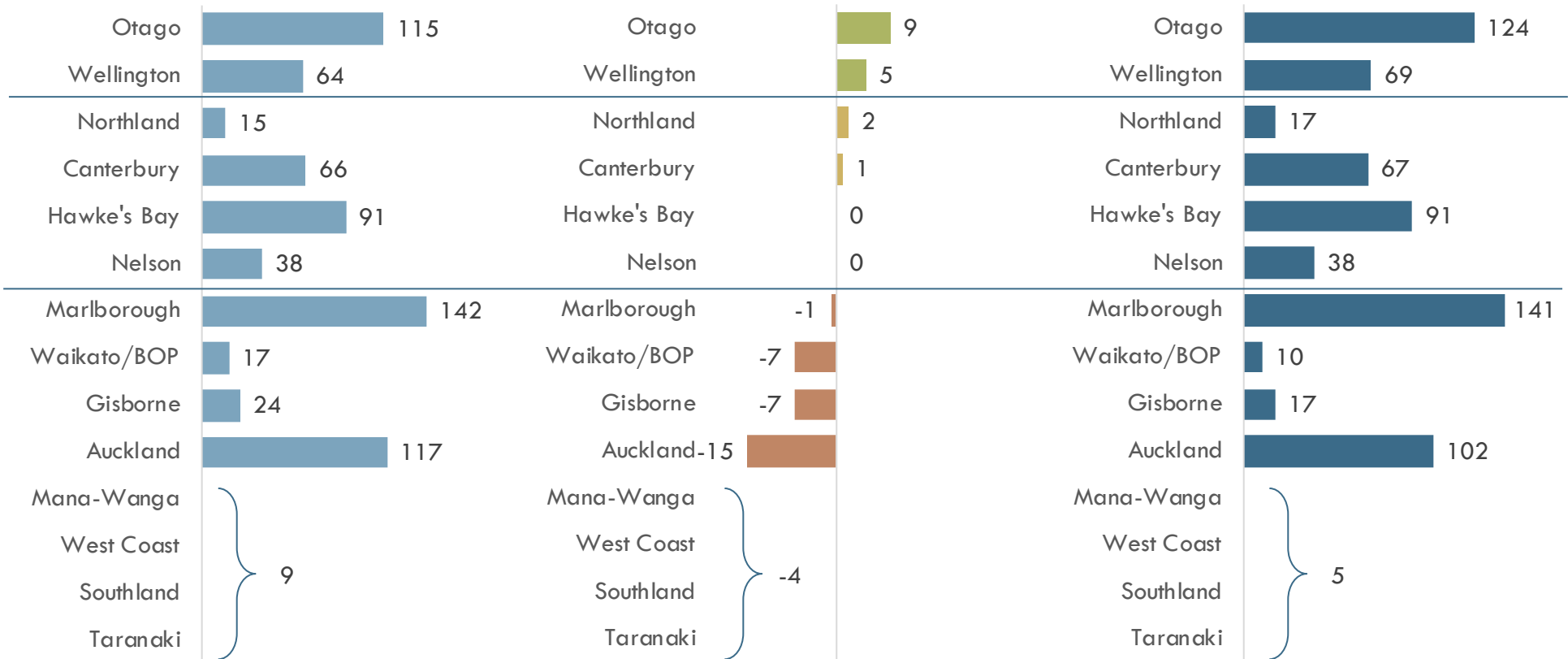
NZW members; 2011

## NET NEW UNITS ADDED

NZW members; 11vs18

## UNIT COUNT IN 2018

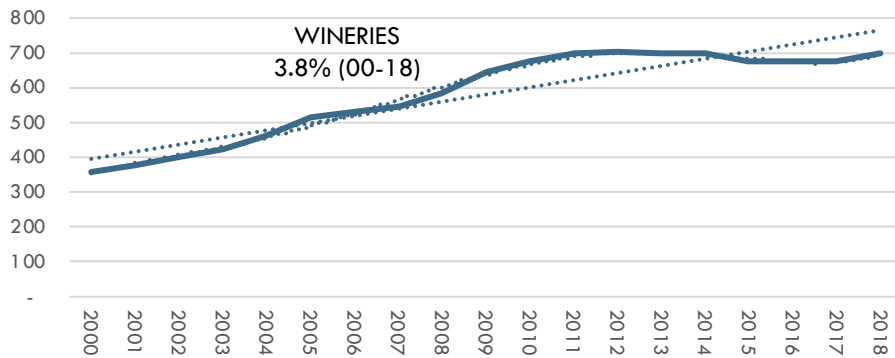
NZW members; 2018



# Tonnes processed per winery is growing, though growth in scale is leading to fewer employees per tonne

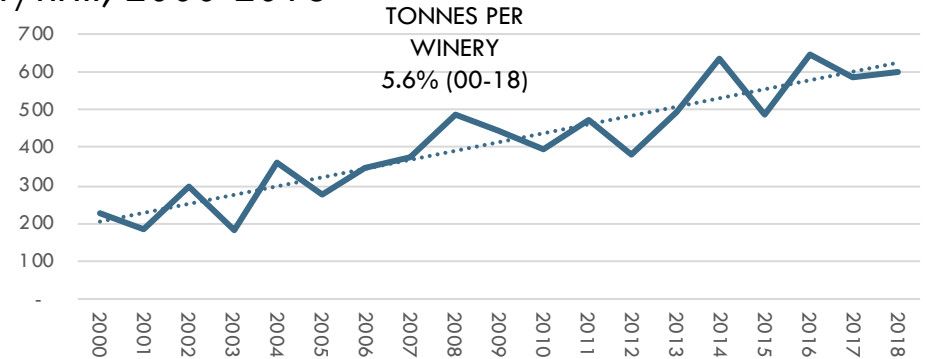
## WINERIES

NZW members; 2000-2018



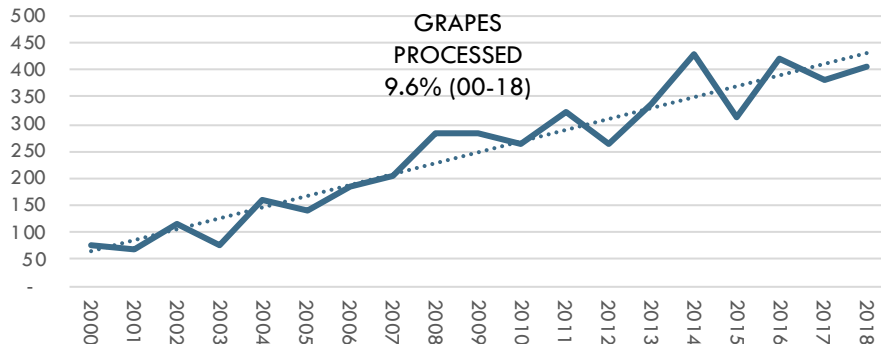
## TONNES/WINERY

T/firm; 2000-2018



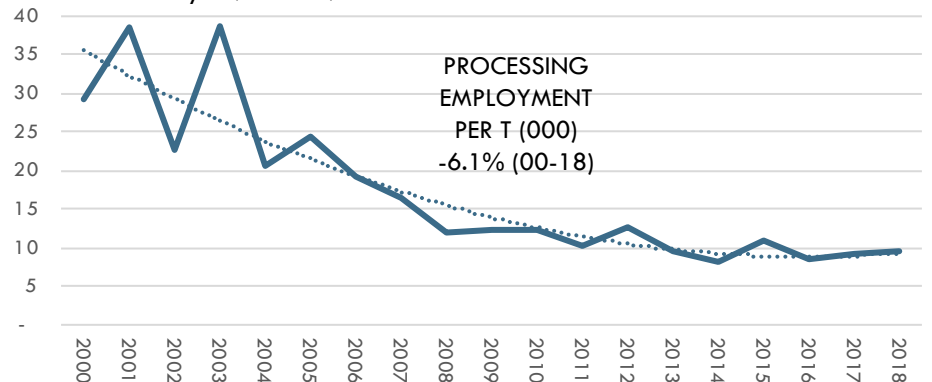
## TONNES OF GRAPES

T; 2000-2018



## EMP. PER 1,000 TONNES

Headcount/1,000t; 2000-2018

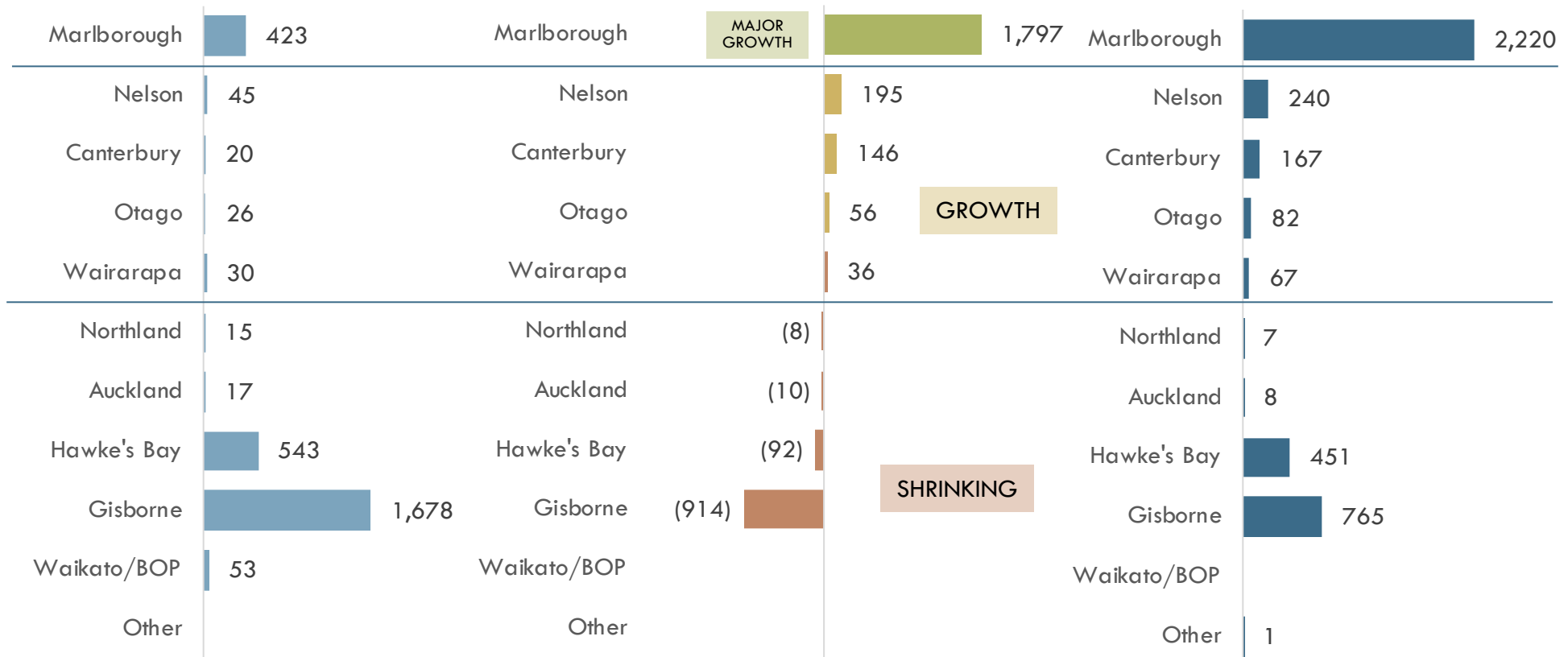


# Performance varies by region, with Marlborough in particular moving to higher volume wineries

**TONNES/WINERY**  
T/firm; 2000

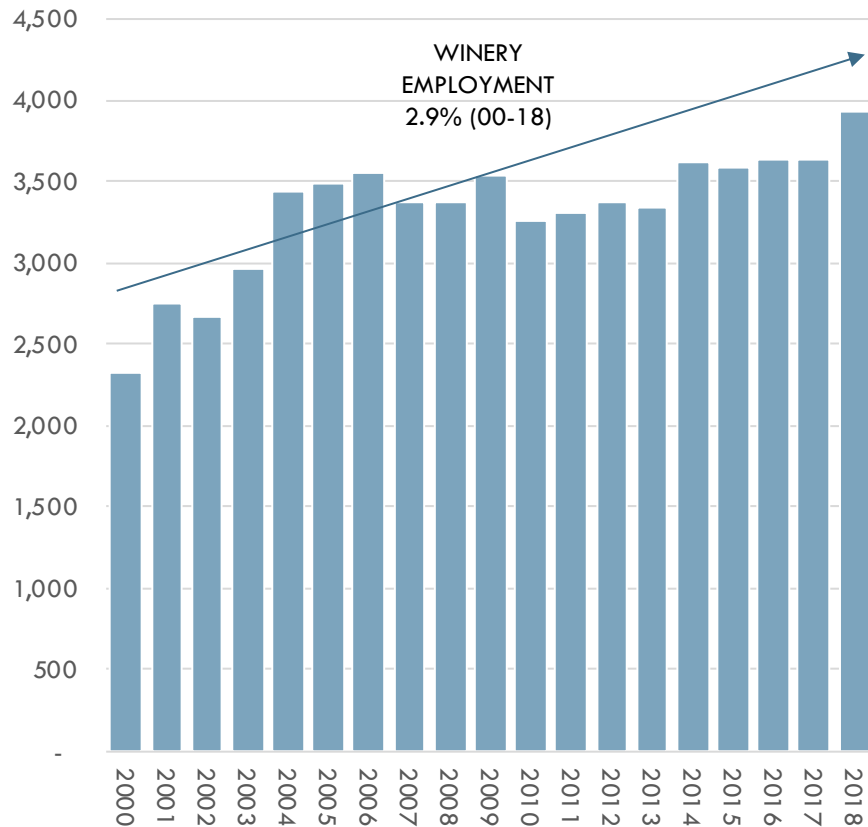
**18Y CHANGE**  
T/firm; 00vs18

**TONNES/WINERY**  
T/firm; 2018

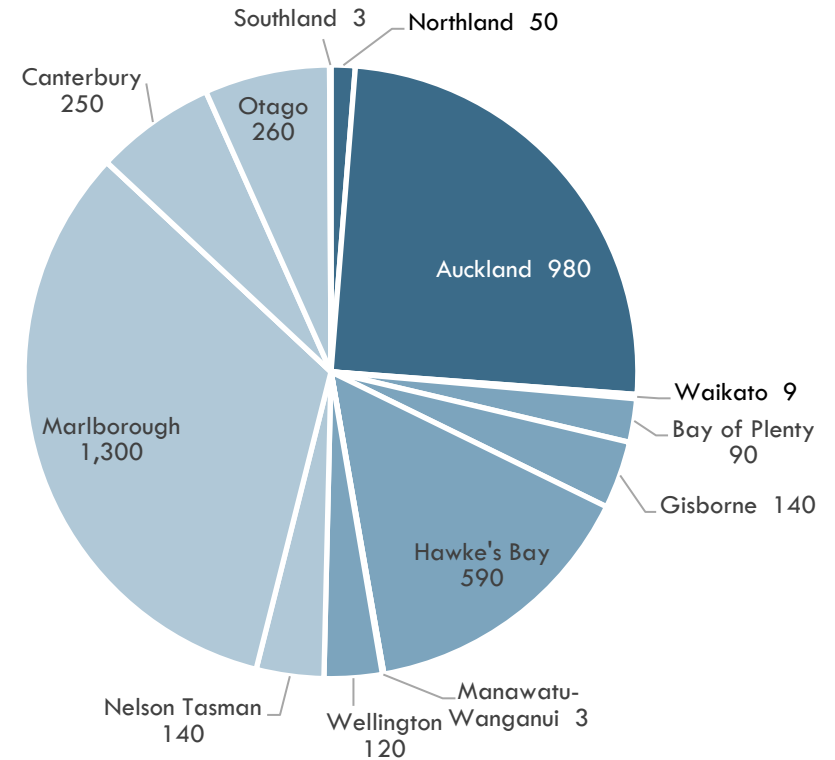


# Due to production growth, New Zealand wineries are creating jobs and jobs are spread across key wine regions

**WINE PROCESSING EMPLOYMENT**  
Headcount; 2000-2018



**WINE PROCESSING EMPLOYMENT**  
Headcount; 2018



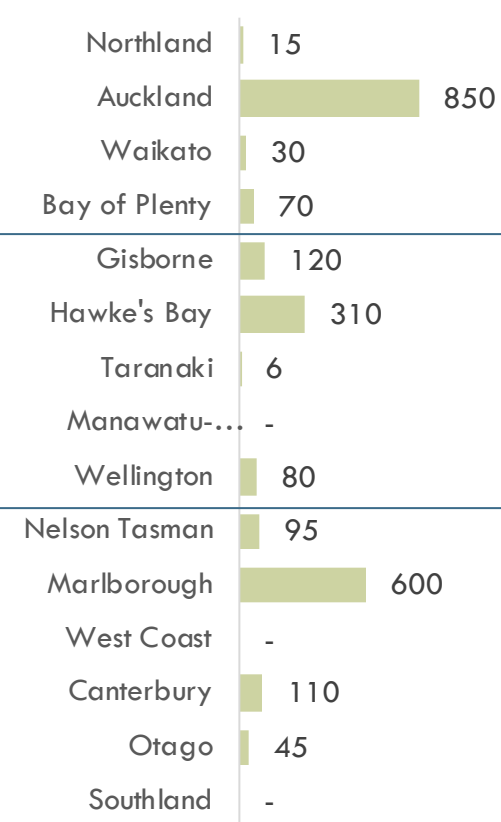
TOTAL = 3,935 wine processing employees



# Marlborough, Auckland, Hawke's Bay, Otago and Canterbury are creating significant new wine processing employment

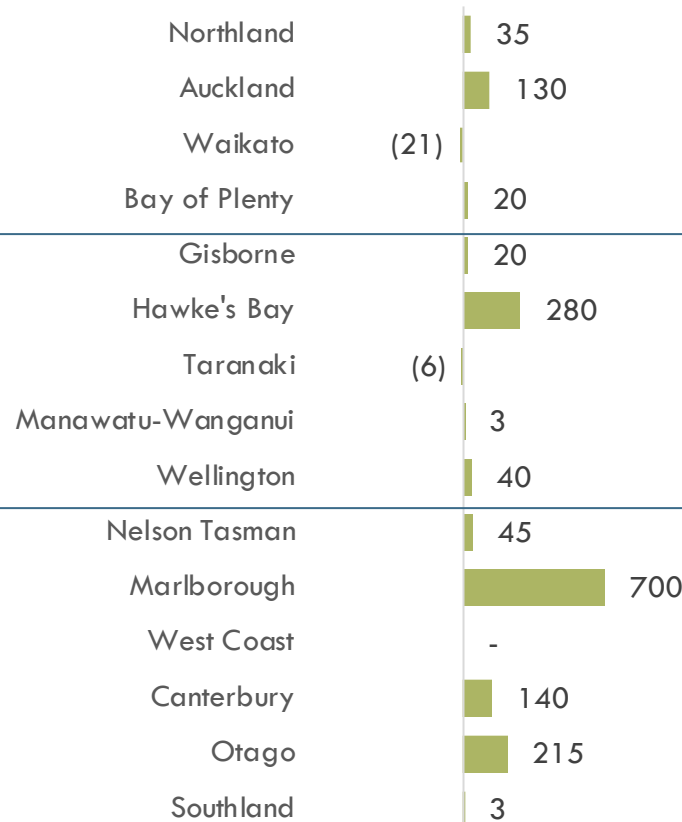
## EMPLOYMENT 2000

Headcount; 2000



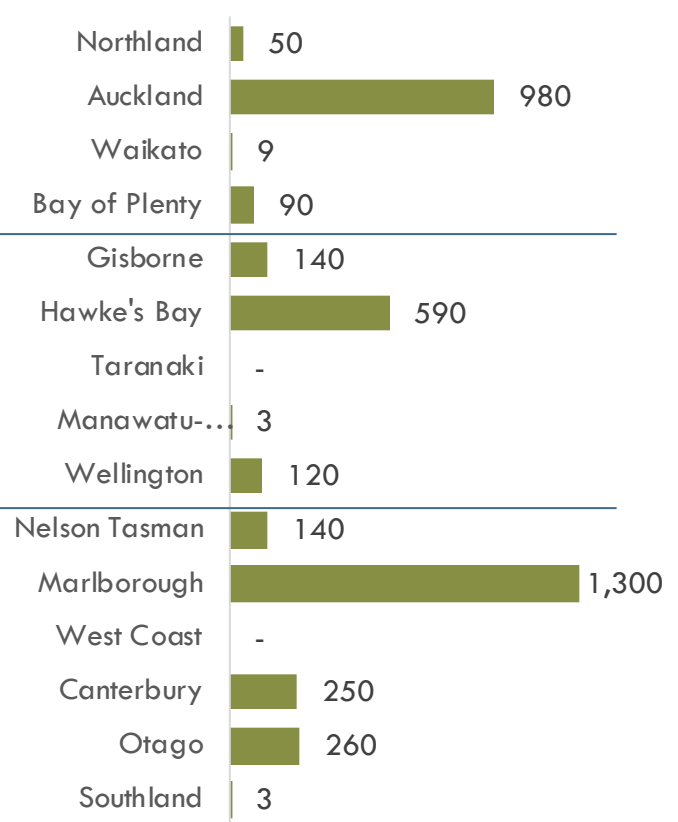
## 18Y CHANGE

Headcount; 00vs18



## EMPLOYMENT 2018

Headcount; 2018



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## *SUMMARY FINDINGS: New Zealand has growing beverage processing employment*

- New Zealand produces a range of non-wine beverages
- Overall, the number of non-wine beverage manufacturing operations is growing and units are spread across the country
  - All regions (other than BOP) are creating new operational units
- The rapid growth of new processing operations is driving down average employment per unit but growing total employment
  - Employment per unit is falling in many areas, particularly in Auckland, but growing in others
- Beverage processing is creating jobs; however, most jobs are concentrated in Auckland
  - Beverage employment growth varies by region; Auckland, Waikato, Hawke's Bay, Wellington and Otago doing well

## New Zealand produces a range of non-wine beverages



### BEER

Water (~90-95%)  
Barley/other grains  
Hops  
Flavours



### SPIRITS

Water (60-70%)  
Alcohol (whey, grains or other)  
Flavours



### SOFT DRINKS

Water (90%+)  
Juices  
Sugar/sweeteners  
Caffeine (from coffee)  
Flavours



### JUICE

Fruit  
(Water 85-90%)

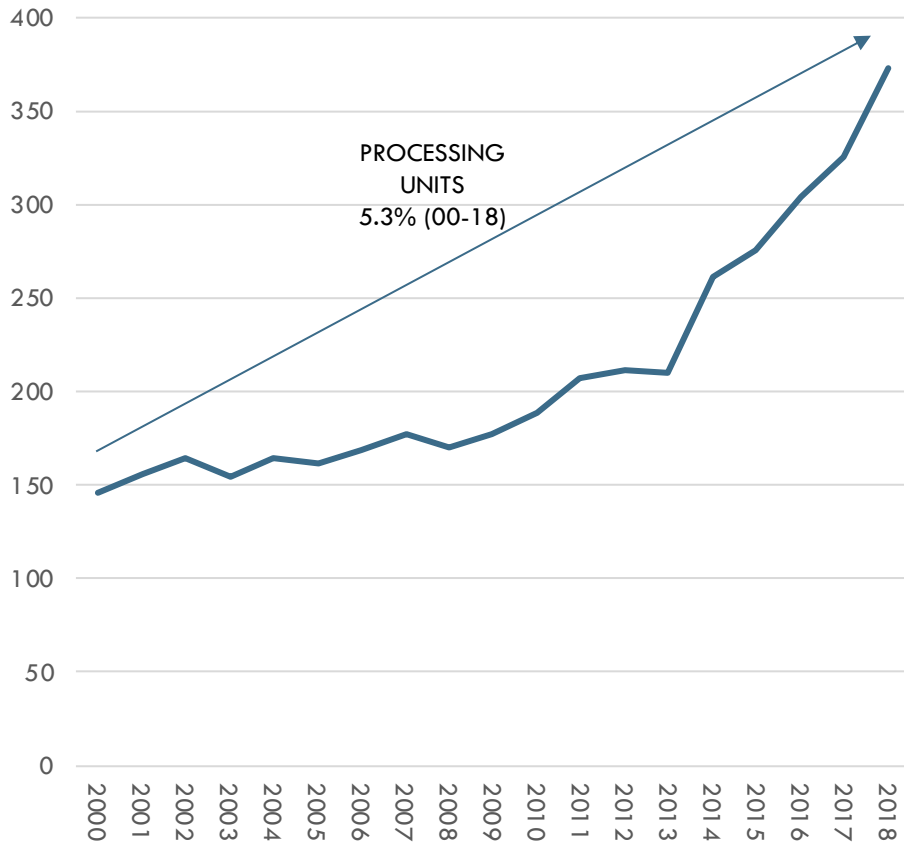


### WATER

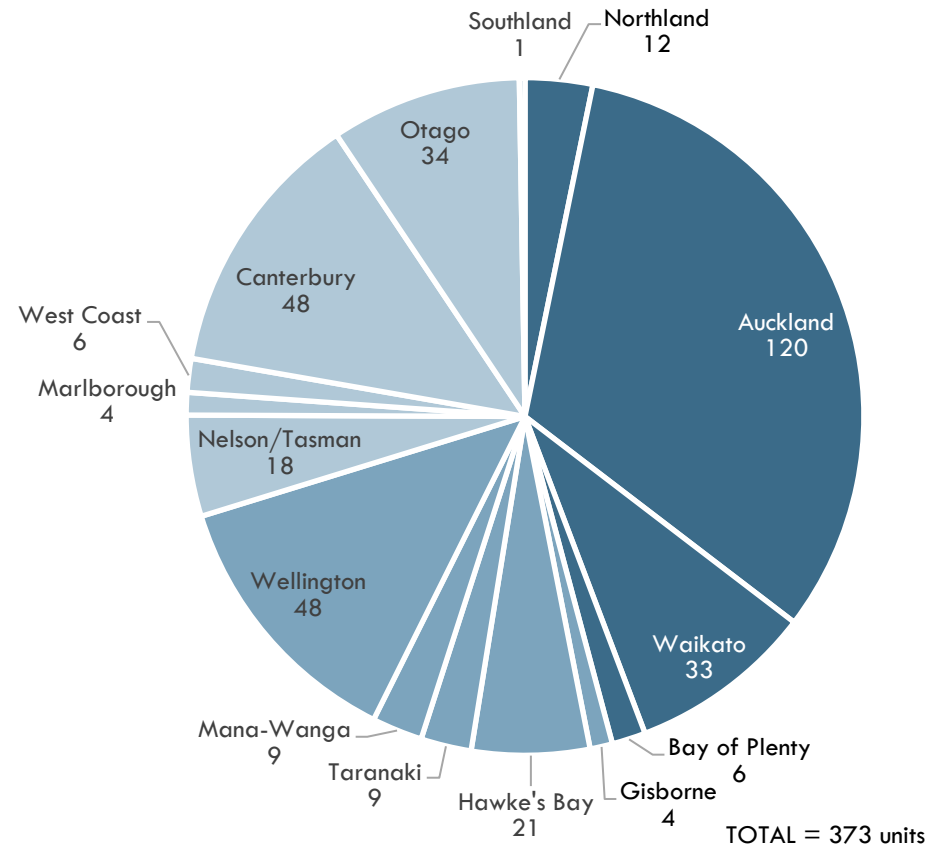
Water

# Overall, the number of non-wine beverage manufacturing operations is growing and units are spread across the country

**BEVERAGE PROCESSING UNITS IN NZ**  
Geographic units; 2000-2018



**BEVERAGE UNITS BY REGION**  
Geographic units; 2018



Note: Excludes wineries and dairy based beverages; Source: Statistics NZ; Coriolis analysis

# All regions (other than BOP) are creating new operational units

## OPERATIONS IN 2000

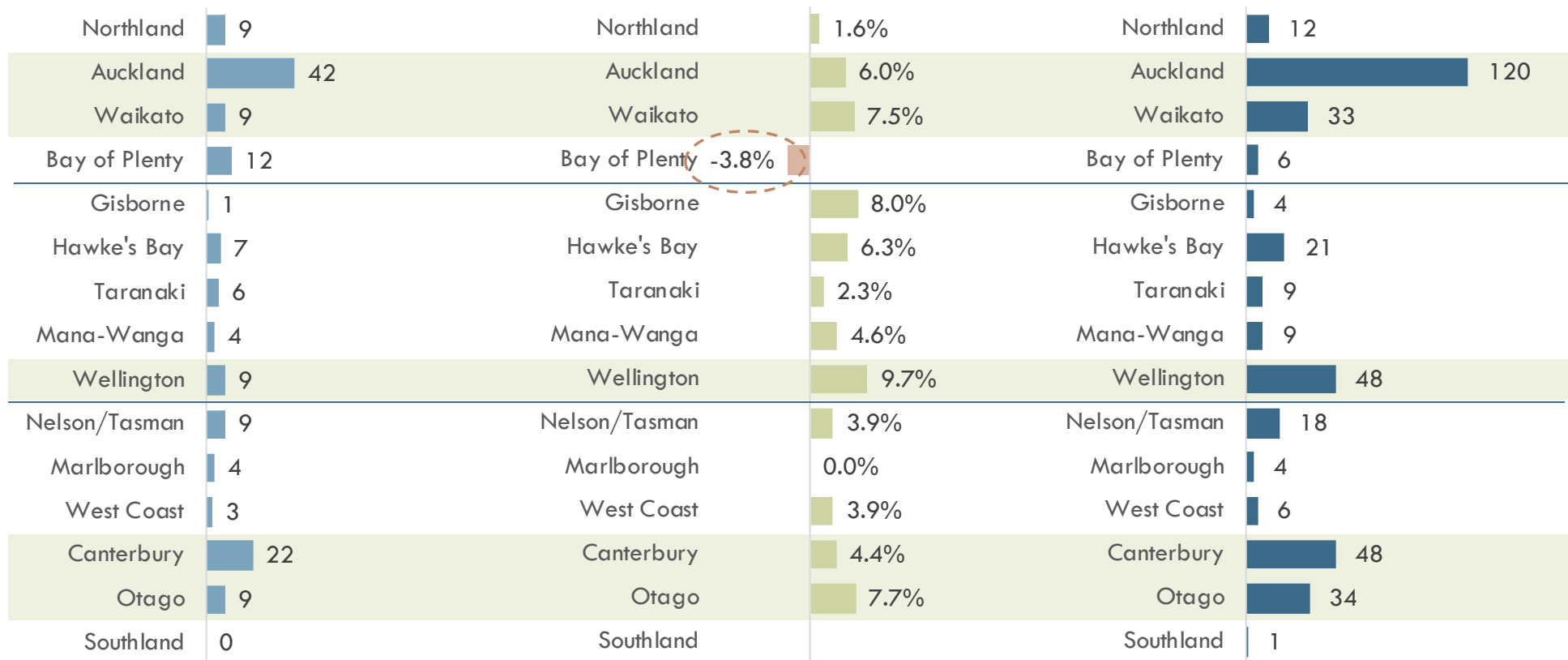
Geographic units; 2000

## 18Y UNIT GROWTH (CAGR)

%; 00vs18

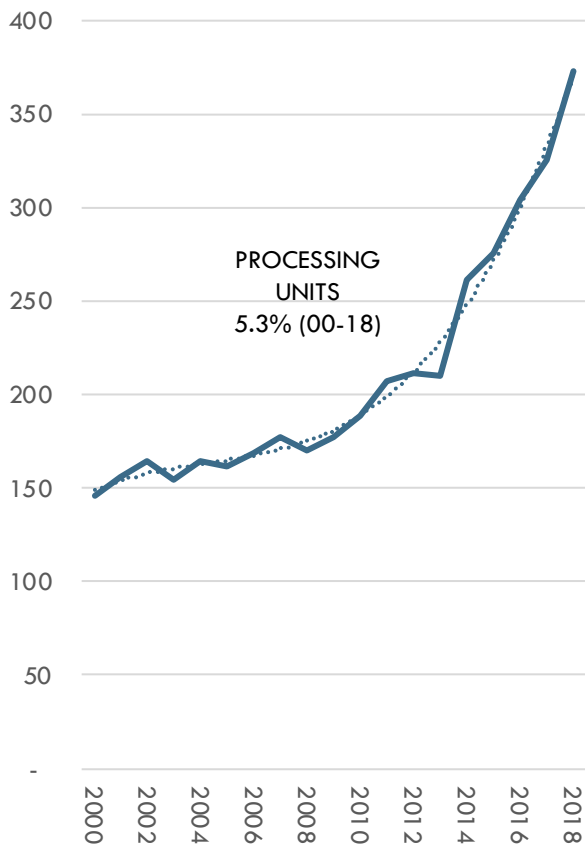
## OPERATIONS IN 2018

Geographic units; 2018

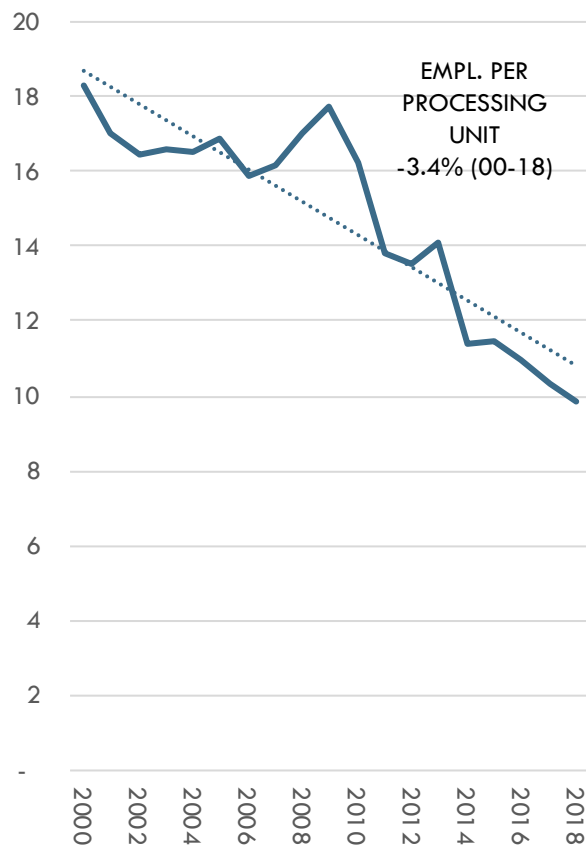


# The rapid growth of new processing operations is driving down average employment per unit but growing total employment

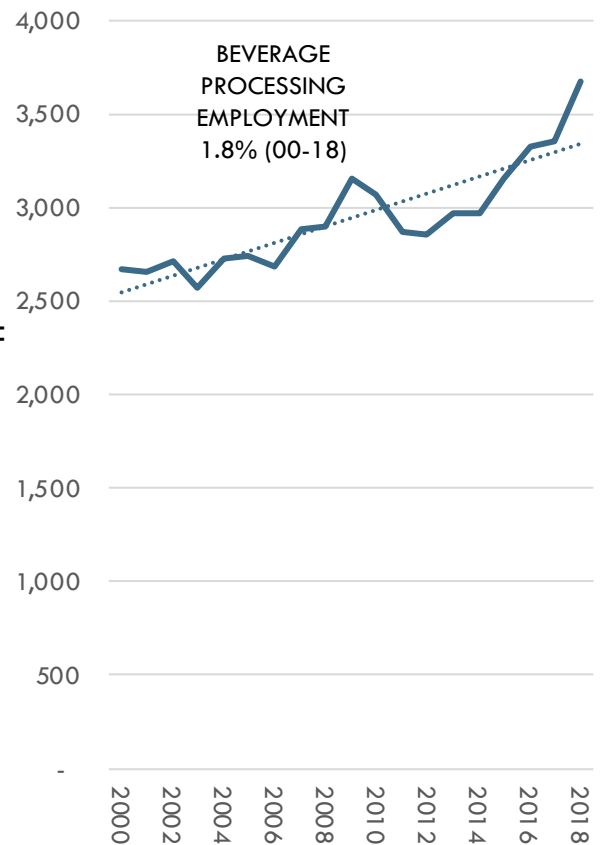
**BEVERAGE PROC. UNITS**  
Geographic units; 2000-2018



**JOBS/UNIT**  
Headcount/unit; 2000-2018



**TOTAL EMPLOYMENT**  
Headcount; 2000-2018



X =

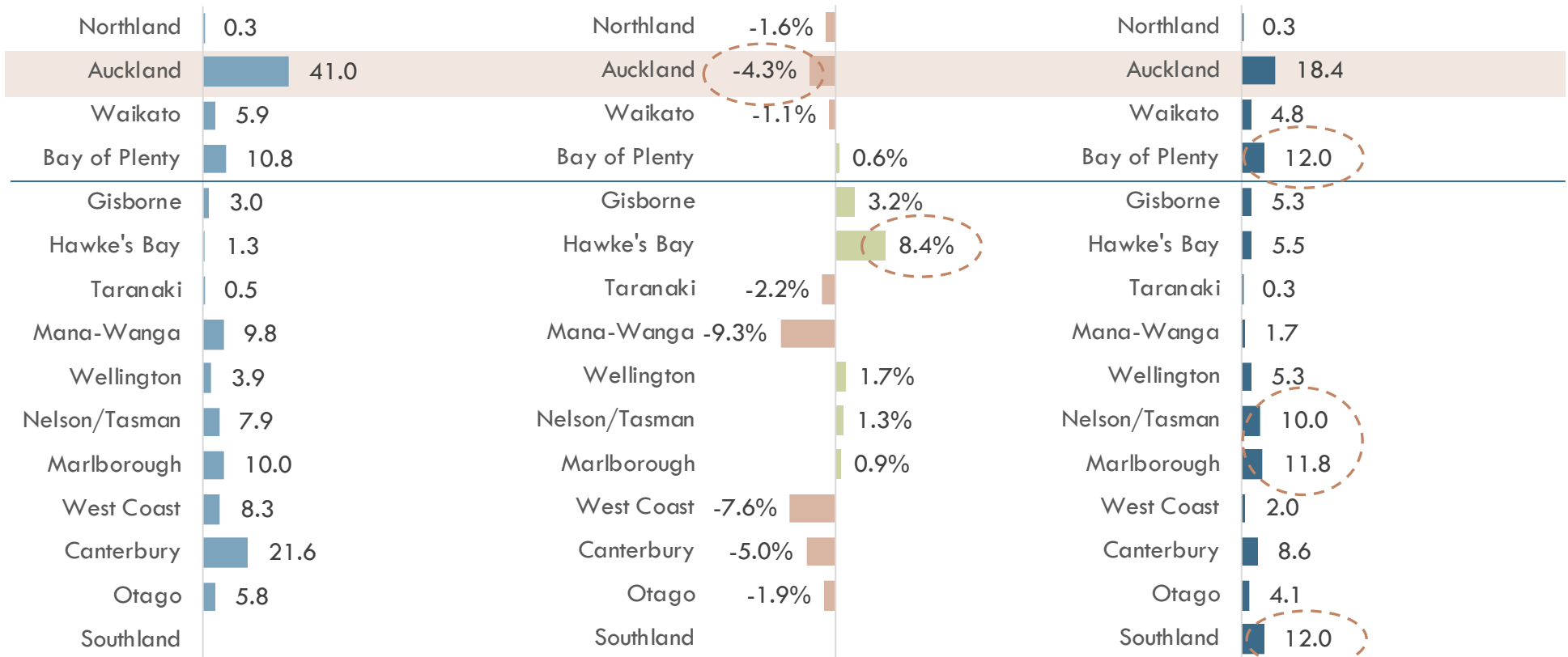
Source: Statistics NZ; UN FAO; MAF/MPI; Coriolis analysis

# Employment per unit is falling in many areas, particularly in Auckland, but growing in others

**EMPLOYMENT/UNIT 2000**  
Headcount/units; 2000

**18Y CHANGE (CAGR)**  
%; 00vs18

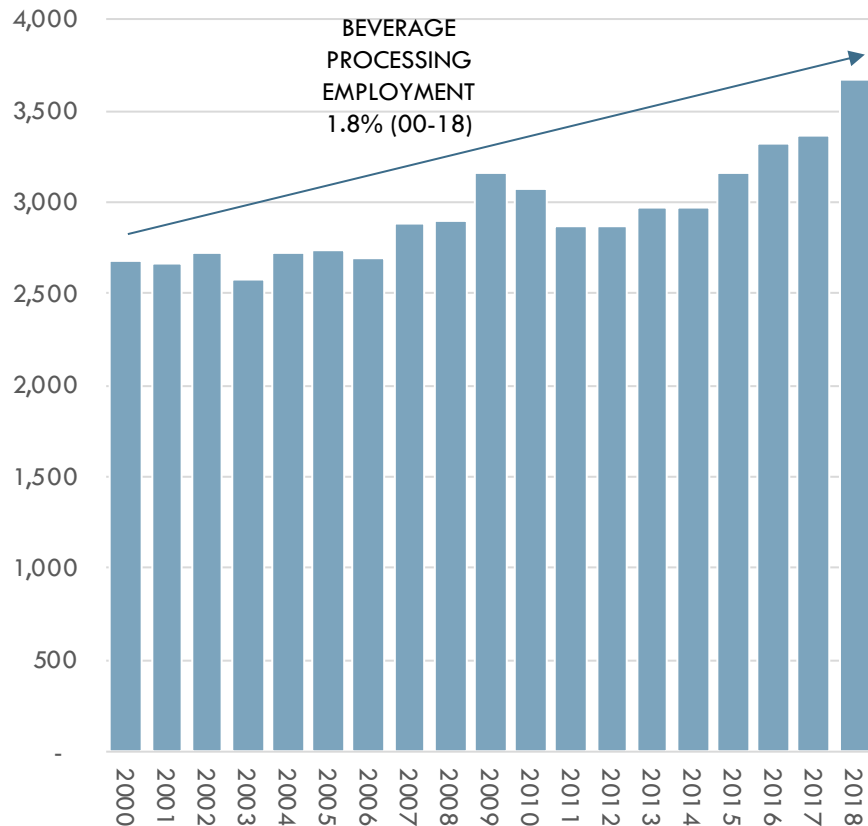
**EMPLOYMENT/UNIT 2018**  
Headcount/units; 2018



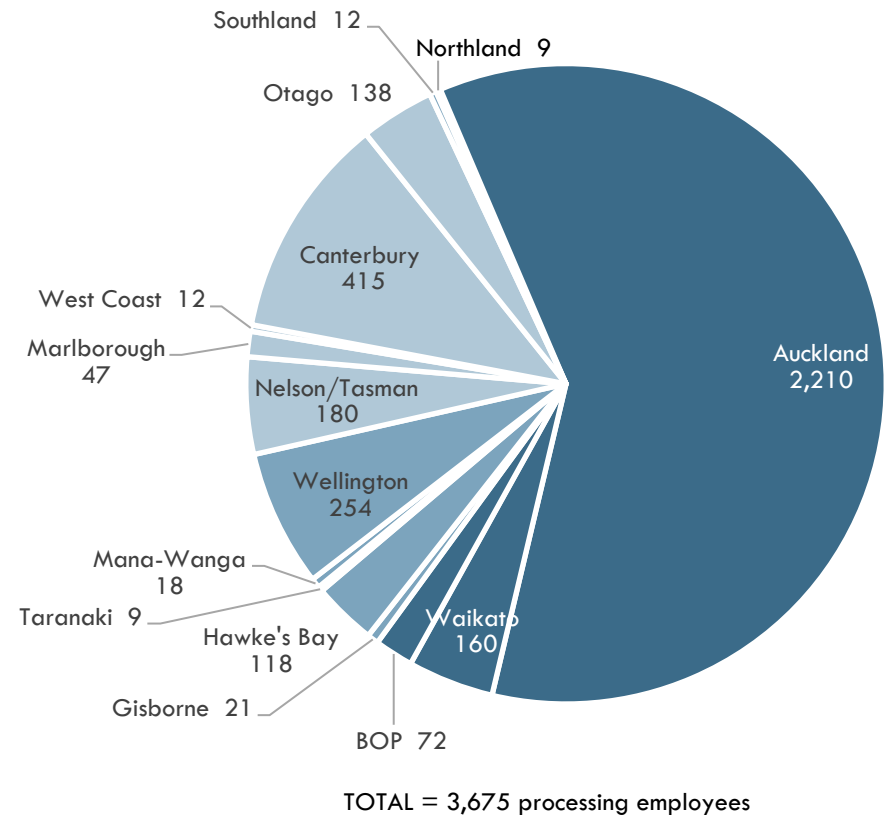


# Beverage processing is creating jobs; however, most jobs are concentrated in Auckland

**BEVERAGE PROCESSING EMPLOYMENT**  
Headcount; 2000-2018



**BEVERAGE PROCESSING EMPLOYMENT**  
Headcount; 2018



# Beverage employment growth varies by region; Auckland, Waikato, Hawke's Bay, Wellington and Otago doing well

## EMPLOYMENT 2000

Headcount; 2000

## 18Y CHANGE (CAGR)

%; 00vs18

## EMPLOYMENT 2018

Headcount; 2018

Region	2000 Headcount	18Y Change (CAGR) %	2018 Headcount
Northland	9	0.0%	9
Auckland	1,720	1.4%	2,210
Waikato	53	6.3%	160
Bay of Plenty	132	-3.3%	72
Gisborne	3	11.4%	21
Hawke's Bay	9	15.4%	118
Taranaki	3	6.3%	9
Mana-Wanga	39	-4.2%	18
Wellington	38	11.1%	254
Nelson/Tasman	74	5.1%	180
Marlborough	40	0.9%	47
West Coast	25	-4.0%	12
Canterbury	475	-0.7%	415
Otago	52	5.6%	138
Southland	-		12

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# APPENDIX

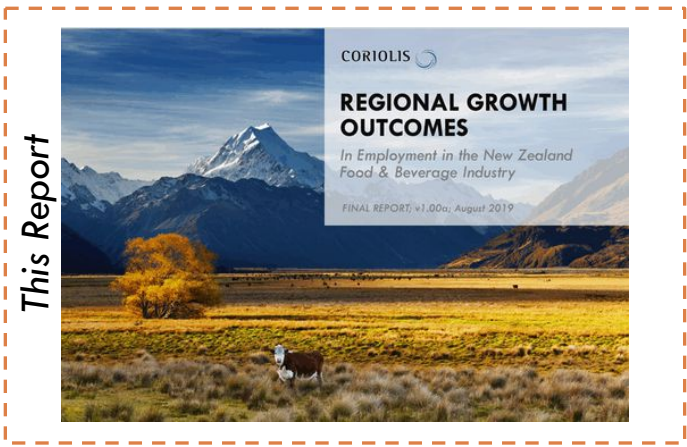
A1. Regional Growth Opportunities project context

A2. Regional Metrics Snapshot

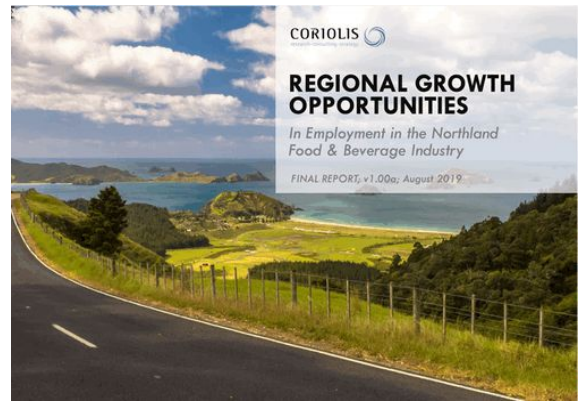
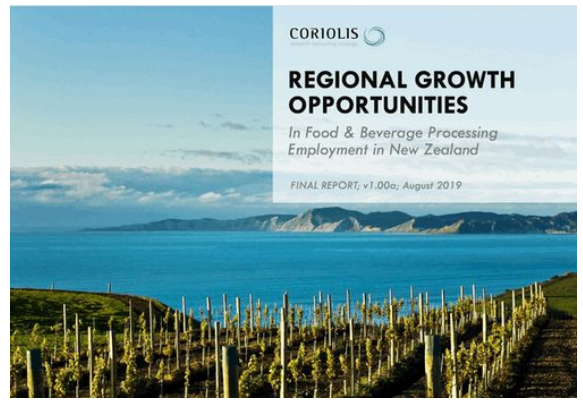
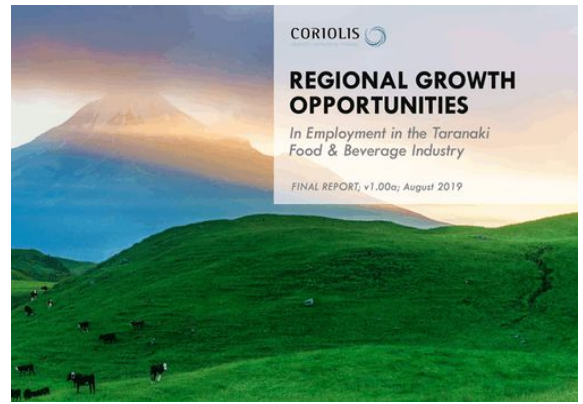
A3. Abbreviations

# A1: This work is part of the Regional Growth Opportunities research

## NATIONAL

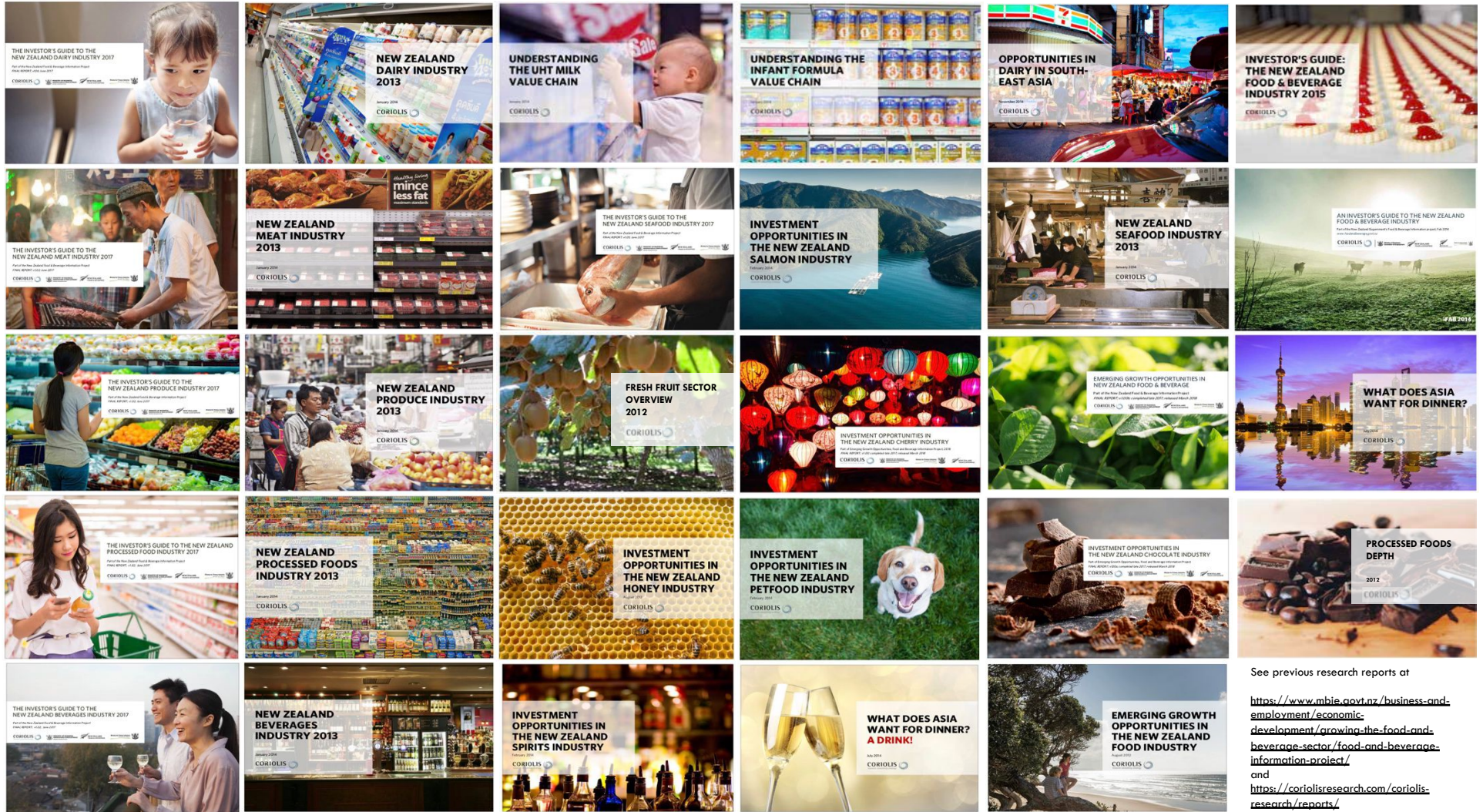


## SELECT REGIONS





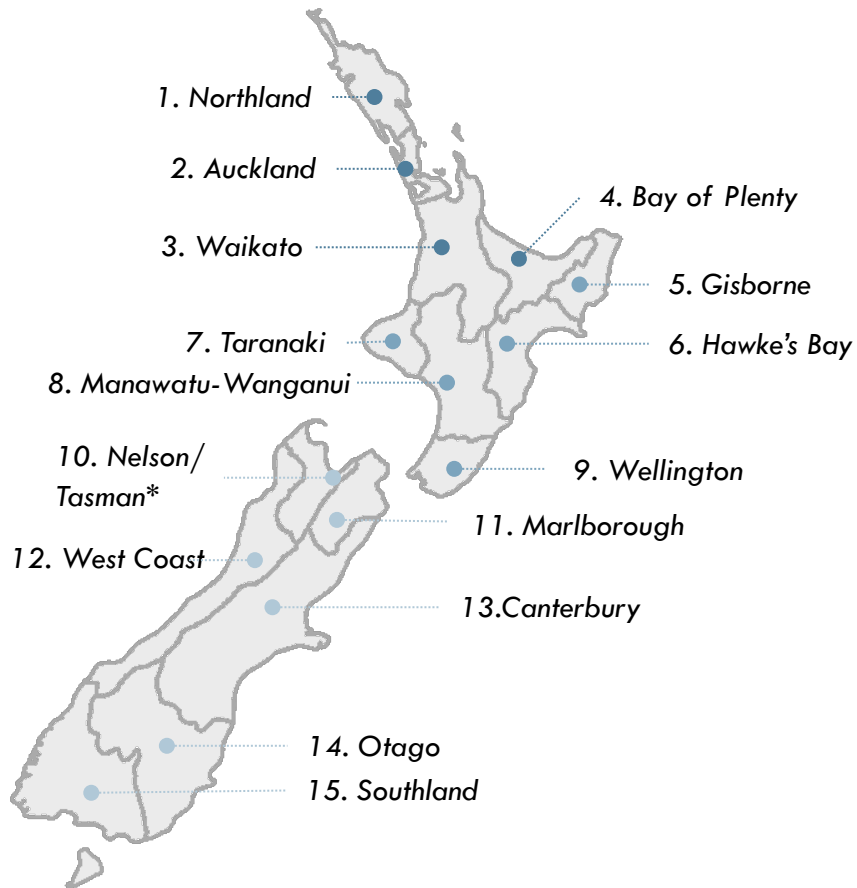
# This work builds on previous research as part of the F&BIP



See previous research reports at  
<https://www.mbie.govt.nz/business-and-employment/economic-development/growing-the-food-and-beverage-sector/food-and-beverage-information-project/>  
 and  
<https://coriolisresearch.com/coriolis-research/reports/>

# A2. APPENDICES: REGIONS SNAPSHOT

## REGIONS OF NEW ZEALAND PROFILED



# 1. NORTHLAND – ON-FARM

## ON-FARM QUANTITATIVE METRICS SCORECARD: NORTHLAND

Various units as given; 2000-2018

	Share of NZ area*	Units (2018)	% NZ units of this sector	Units 18y ABS (00-18)	Units 18y CAGR (00-18)	On-farm jobs (2018)	% NZ on-farm jobs in this sector	Employment 18y ABS (00-18)	Employment 18y CAGR (00-18)
Dairy	8.3%	1,008	6.8%	-1,077	-4.0%	2,358	5.8%	-777	-1.6%
Red Meat & Pork	4.2%	2,172	8.9%	-645	-1.4%	3,048	6.8%	-691	-1.1%
Poultry Meat	N/A	6	2.0%	-24	-8.6%	6	0.4%	-27	-9.0%
Seafood	18.9%	141	9.2%	-75	-2.3%	276	5.5%	-110	-1.8%
Arable Crops	2.0%	70	1.6%	49	6.9%	129	2.1%	96	7.9%
Produce	6.2%	411	12.8%	-135	-1.6%	1,667	5.9%	-164	-0.5%
Other Foods	N/A	147	12.3%	123	10.6%	427	9.1%	362	11.0%
Grapes	0.2%	18	1.3%	6	2.3%	73	1.5%	46	5.7%
<b>TOTAL</b>	<b>4.7%</b>	<b>3,973</b>	<b>7.7%</b>	<b>-1,778</b>	<b>-2.0%</b>	<b>7,984</b>	<b>5.9%</b>	<b>-1,265</b>	<b>-0.8%</b>



# 1. NORTHLAND – PROCESSING

## PROCESSING QUANTITATIVE METRICS SCORECARD: NORTHLAND

Various units as given; 2000-2018

	Units (2018)	Region has this % of all NZ units in this sector	18y ABS % of new unit growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average	Processing jobs (2018)	Region has this % all NZ processing jobs in this sector	18y ABS % of new NZ employment growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average		
Dairy	6	2.8%	0	0%	0.0%	↓	560	4.3%	-80	-2%	-0.7%	↓
Red Meat & Pork	12	3.7%	0	0%	0.0%	↓	710	2.7%	-155	-13%	-1.1%	↓
Poultry Meat	-	0.0%	0	0%	N/A	↑	-	0.0%	0	0%	N/A	↑
Seafood	15	4.6%	-3	-	-1.0%	↓	99	1.9%	3	-	0.2%	↑
Produce	15	3.2%	0	0%	0.0%	↓	195	2.1%	64	8%	2.2%	↑
Grain-Based	6	1.6%	-3	-	-2.2%	↓	24	0.4%	-141	-	-10.2%	↓
Processed Foods	37	3.7%	25	5%	6.5%	↑	226	1.9%	187	4%	10.3%	↑
Wine	6	1.4%	0	0%	0.0%	↓	50	1.3%	35	2%	6.9%	↑
Other Beverages	12	3.2%	3	1%	1.6%	↓	9	0.2%	0	0%	0.0%	↓
<b>TOTAL</b>	<b>109</b>	<b>3.1%</b>	<b>22</b>	<b>2%</b>	<b>1.3%</b>	<b>↓</b>	<b>1,873</b>	<b>2.2%</b>	<b>-87</b>	<b>-1%</b>	<b>-0.3%</b>	<b>↓</b>

ABS = Absolute change; CAGR = Compound Annual Growth Rate; Source: Statistics NZ; DairyNZ; MAF/MPI; Coriolis analysis and estimates

## 2. AUCKLAND – ON-FARM

### ON-FARM QUANTITATIVE METRICS SCORECARD: AUCKLAND

Various units as given; 2000-2018

	Share of NZ area*	Units (2018)	% NZ units of this sector	Units 18y ABS (00-18)	Units 18y CAGR (00-18)	On-farm jobs (2018)	% NZ on-farm jobs in this sector	Employment 18y ABS (00-18)	Employment 18y CAGR (00-18)
Dairy	3.2%	417	2.8%	-585	-4.8%	747	1.8%	-705	-3.6%
Red Meat & Pork	1.6%	1,542	6.3%	-768	-2.2%	1,974	4.4%	-896	-2.1%
Poultry Meat	N/A	60	20.0%	-51	-3.4%	190	12.9%	-31	-0.8%
Seafood	14.3%	132	8.6%	-108	-3.3%	238	4.7%	-177	-3.0%
Arable Crops	0.9%	78	1.7%	42	4.4%	148	2.4%	106	7.2%
Produce	7.1%	273	8.5%	-165	-2.6%	2,572	9.1%	-1,092	-1.9%
Other Foods	N/A	123	10.3%	57	3.5%	433	9.3%	229	4.3%
Grapes	0.9%	81	5.9%	-30	-1.7%	621	12.8%	390	5.6%
<b>TOTAL</b>	<b>1.9%</b>	<b>2,706</b>	<b>5.3%</b>	<b>-1,608</b>	<b>-2.6%</b>	<b>6,923</b>	<b>5.1%</b>	<b>-2,176</b>	<b>-1.5%</b>

## 2. AUCKLAND – PROCESSING

### PROCESSING QUANTITATIVE METRICS SCORECARD: AUCKLAND

Various units as given; 2000-2018

	Units (2018)	Region has this % of all NZ units in this sector	% of new unit 18y ABS growth in sector (00-18)	% of new unit 18y CAGR (00-18)	18y CAGR vs NZ average	Processing jobs (2018)	Region has this % all NZ processing jobs in this sector	% of new NZ employment 18y ABS growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average		
Dairy	63	29.2%	42	39%	6.3%	↑	2,150	16.6%	1,220	26%	4.8%	↑
Red Meat & Pork	54	16.5%	0	0%	0.0%	↓	1,720	6.4%	570	47%	2.3%	↑
Poultry Meat	12	34.3%	0	0%	0.0%	↑	1,100	30.3%	590	37%	4.4%	↑
Seafood	105	32.2%	6	-	0.3%	↑	980	19.2%	210	-	1.3%	↑
Produce	147	31.6%	9	15%	0.4%	↓	2,360	25.9%	880	106%	2.6%	↑
Grain-Based	138	37.3%	45	-	2.2%	↑	2,940	44.2%	555	-	1.2%	↑
Processed Foods	348	34.9%	187	37%	4.4%	↑	5,350	44.5%	1,080	24%	1.3%	↓
Wine	75	17.1%	33	13%	3.3%	↓	980	24.9%	130	8%	0.8%	↓
Other Beverages	120	32.2%	78	34%	6.0%	↑	2,210	60.1%	490	49%	1.4%	↓
<b>TOTAL</b>	<b>1,062</b>	<b>29.9%</b>	<b>400</b>	<b>35%</b>	<b>2.7%</b>	<b>↑</b>	<b>19,790</b>	<b>23.6%</b>	<b>5,725</b>	<b>42%</b>	<b>1.9%</b>	<b>↑</b>

## 3. WAIKATO – ON-FARM

### ON-FARM QUANTITATIVE METRICS SCORECARD: WAIKATO

Various units as given; 2000-2018

	Share of NZ area*	Units (2018)	% NZ units of this sector	Units 18y ABS (00-18)	Units 18y CAGR (00-18)	On-farm jobs (2018)	% NZ on-farm jobs in this sector	Employment 18y ABS (00-18)	Employment 18y CAGR (00-18)
Dairy	28.2%	5,055	34.0%	-2,928	-2.5%	12,055	29.8%	-778	-0.3%
Red Meat & Pork	9.0%	3,390	13.8%	-1,416	-1.9%	5,421	12.1%	-1,935	-1.7%
Poultry Meat	N/A	81	27.0%	-9	-0.6%	601	40.7%	281	3.6%
Seafood	8.0%	126	8.2%	-33	-1.3%	311	6.2%	-98	-1.5%
Arable Crops	8.1%	459	10.2%	303	6.2%	964	15.6%	752	8.8%
Produce	8.5%	246	7.6%	-150	-2.6%	2,504	8.9%	-396	-0.8%
Other Foods	N/A	144	12.1%	75	4.2%	594	12.7%	375	5.7%
Grapes	0.0%	9	0.7%	-9	-3.8%	34	0.7%	-34	-3.8%
<b>TOTAL</b>	<b>9.0%</b>	<b>9,510</b>	<b>18.5%</b>	<b>-4,167</b>	<b>-2.0%</b>	<b>22,484</b>	<b>16.6%</b>	<b>-1,833</b>	<b>-0.4%</b>

## 3. WAIKATO – PROCESSING

### PROCESSING QUANTITATIVE METRICS SCORECARD: WAIKATO

Various units as given; 2000-2018

	Units (2018)	Region has this % of all NZ units in this sector	18y ABS (00-18)	% of new unit growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average	Processing jobs (2018)	Region has this % all NZ processing jobs in this sector	18y ABS (00-18)	% of new NZ employment growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average
Dairy	39	18.1%	15	14%	2.7%	↓	3,200	24.7%	1,450	31%	3.4%	↑
Red Meat & Pork	36	11.0%	-3	-11%	-0.4%	↓	2,490	9.3%	360	29%	0.9%	↑
Poultry Meat	9	25.7%	6	-	6.3%	↑	1,050	28.9%	560	35%	4.3%	↑
Seafood	21	6.4%	3	-	0.9%	↑	209	4.1%	-51	-	-1.2%	↑
Produce	21	4.5%	6	10%	1.9%	↑	275	3.0%	117	14%	3.1%	↑
Grain-Based	27	7.3%	6	-	1.4%	↑	206	3.1%	-113	-	-2.4%	↓
Processed Foods	85	8.5%	45	9%	4.3%	↑	1,516	12.6%	1,235	27%	9.8%	↑
Wine	6	1.4%	0	0%	0.0%	↓	9	0.2%	-21	-1%	-6.5%	↓
Other Beverages	33	8.8%	24	11%	7.5%	↑	160	4.4%	107	11%	6.3%	↑
<b>TOTAL</b>	<b>277</b>	<b>7.8%</b>	<b>102</b>	<b>9%</b>	<b>2.6%</b>	<b>↑</b>	<b>9,115</b>	<b>10.9%</b>	<b>3,644</b>	<b>27%</b>	<b>2.9%</b>	<b>↑</b>

## 4. BAY OF PLENTY – ON-FARM

### ON-FARM QUANTITATIVE METRICS SCORECARD: BAY OF PLENTY

Various units as given; 2000-2018

	Share of NZ area*	Units (2018)	% NZ units of this sector	Units 18y ABS (00-18)	Units 18y CAGR (00-18)	On-farm jobs (2018)	% NZ on-farm jobs in this sector	Employment 18y ABS (00-18)	Employment 18y CAGR (00-18)
Dairy	8.0%	867	5.8%	-489	-2.5%	2,167	5.3%	-389	-0.9%
Red Meat & Pork	1.2%	1,056	4.3%	-648	-2.6%	1,594	3.6%	-723	-2.1%
Poultry Meat	N/A	12	4.0%	-24	-5.9%	42	2.8%	6	0.9%
Seafood	4.3%	108	7.0%	-69	-2.7%	243	4.8%	-50	-1.0%
Arable Crops	1.4%	120	2.7%	18	0.9%	159	2.6%	-12	-0.4%
Produce	12.4%	2,103	65.3%	-84	-0.2%	4,126	14.7%	-355	-0.5%
Other Foods	N/A	183	15.4%	126	6.7%	518	11.1%	351	6.5%
Grapes	0.0%	9	0.7%	9	N/A	27	0.6%	27	N/A
<b>TOTAL</b>	<b>4.6%</b>	<b>4,458</b>	<b>8.7%</b>	<b>-1,161</b>	<b>-1.3%</b>	<b>8,876</b>	<b>6.6%</b>	<b>-1,145</b>	<b>-0.7%</b>

ABS = Absolute change; CAGR = Compound Annual Growth Rate; \*Seafood uses share of coastline; poultry meat and other foods (eggs and honey) are not directly area dependent; Source: Statistics NZ; DairyNZ; MAF/MPI; MfE; Coriolis analysis and estimates

# 4. BAY OF PLENTY – PROCESSING

## PROCESSING QUANTITATIVE METRICS SCORECARD: BAY OF PLENTY

Various units as given; 2000-2018

	Units (2018)	Region has this % of all NZ units in this sector	% of new unit 18y ABS growth in sector (00-18)	% of new unit 18y CAGR (00-18)	18y CAGR vs NZ average	Processing jobs (2018)	Region has this % all NZ processing jobs in this sector	% of new NZ employment 18y ABS growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average		
Dairy	9	4.2%	6	6%	6.3%	↑	310	2.4%	-120	-3%	-1.8%	↓
Red Meat & Pork	16	4.9%	3	11%	1.2%	↑	569	2.1%	-281	-23%	-2.2%	↓
Poultry Meat	-	0.0%	-1	-	-100.0%	↓	-	0.0%	-30	-2%	-100.0%	↓
Seafood	21	6.4%	3	-	0.9%	↑	415	8.1%	100	-	1.5%	↑
Produce	48	10.3%	12	19%	1.6%	↑	670	7.3%	370	45%	4.6%	↑
Grain-Based	16	4.3%	-14	-	-3.4%	↓	460	6.9%	-31	-	-0.4%	↓
Processed Foods	58	5.8%	27	5%	3.5%	↓	866	7.2%	513	11%	5.1%	↑
Wine	6	1.4%	5	2%	10.5%	↑	90	2.3%	20	1%	1.4%	↓
Other Beverages	6	1.6%	-6	-3%	-3.8%	↓	72	2.0%	-60	-6%	-3.3%	↓
<b>TOTAL</b>	<b>180</b>	<b>5.1%</b>	<b>35</b>	<b>3%</b>	<b>1.2%</b>	<b>↓</b>	<b>3,452</b>	<b>4.1%</b>	<b>481</b>	<b>4%</b>	<b>0.8%</b>	<b>↓</b>

ABS = Absolute change; CAGR = Compound Annual Growth Rate; Source: Statistics NZ; DairyNZ; MAF/MPI; Coriolis analysis and estimates

## 5. GISBORNE – ON-FARM

### ON-FARM QUANTITATIVE METRICS SCORECARD: GISBORNE

Various units as given; 2000-2018

	Share of NZ area*	Units (2018)	% NZ units of this sector	Units 18y ABS (00-18)	Units 18y CAGR (00-18)	On-farm jobs (2018)	% NZ on-farm jobs in this sector	Employment 18y ABS (00-18)	Employment 18y CAGR (00-18)
Dairy	0.1%	9	0.1%	-12	-4.6%	49	0.1%	-2	-0.2%
Red Meat & Pork	3.9%	534	2.2%	-240	-2.0%	2,305	5.2%	-148	-0.3%
Poultry Meat	N/A	-	0.0%	0	N/A	-	0.0%	0	N/A
Seafood	1.7%	33	2.1%	-6	-0.9%	68	1.4%	4	0.3%
Arable Crops	1.3%	42	0.9%	-36	-3.4%	97	1.6%	-79	-3.3%
Produce	5.9%	228	7.1%	9	0.2%	943	3.4%	-655	-2.9%
Other Foods	N/A	33	2.8%	18	4.5%	108	2.3%	78	7.4%
Grapes	3.9%	54	3.9%	-48	-3.5%	174	3.6%	-328	-5.7%
<b>TOTAL</b>	<b>3.2%</b>	<b>933</b>	<b>1.8%</b>	<b>-315</b>	<b>-1.6%</b>	<b>3,744</b>	<b>2.8%</b>	<b>-1,130</b>	<b>-1.5%</b>



## 5. GISBORNE – PROCESSING

### PROCESSING QUANTITATIVE METRICS SCORECARD: GISBORNE

Various units as given; 2000-2018

	Units (2018)	Region has this % of all NZ units in this sector	% of new unit 18y ABS growth in sector (00-18)	% of new unit 18y CAGR growth in sector (00-18)	18y CAGR vs NZ average	Processing jobs (2018)	Region has this % all NZ processing jobs in this sector	% of new NZ employment 18y ABS growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average	
Dairy	3	1.4%	3	3%	N/A	45	0.3%	45	1%	N/A	↑
Red Meat & Pork	3	0.9%	-3	-11%	-3.8%	270	1.0%	264	22%	23.6%	↑
Poultry Meat	-	0.0%	0	0%	N/A	-	0.0%	0	0%	N/A	↑
Seafood	7	2.1%	-2	-	-1.4%	46	0.9%	-27	-	-2.5%	↓
Produce	15	3.2%	3	5%	1.2%	680	7.5%	35	4%	0.3%	↓
Grain-Based	8	2.2%	-2	-	-1.2%	104	1.6%	-6	-	-0.3%	↓
Processed Foods	6	0.6%	-1	0%	-0.9%	15	0.1%	-12	0%	-3.2%	↓
Wine	12	2.7%	6	2%	3.9%	140	3.6%	20	1%	0.9%	↓
Other Beverages	4	1.1%	3	1%	8.0%	21	0.6%	18	2%	11.4%	↑
<b>TOTAL</b>	<b>58</b>	<b>1.6%</b>	<b>7</b>	<b>1%</b>	<b>0.7%</b>	<b>1,321</b>	<b>1.6%</b>	<b>337</b>	<b>3%</b>	<b>1.6%</b>	<b>↑</b>

## 6. HAWKE'S BAY – ON-FARM

### ON-FARM QUANTITATIVE METRICS SCORECARD: HAWKE'S BAY

Various units as given; 2000-2018

	Share of NZ area*	Units (2018)	% NZ units of this sector	Units 18y ABS (00-18)	Units 18y CAGR (00-18)	On-farm jobs (2018)	% NZ on-farm jobs in this sector	Employment 18y ABS (00-18)	Employment 18y CAGR (00-18)
Dairy	0.9%	87	0.6%	-51	-2.5%	407	1.0%	109	1.7%
Red Meat & Pork	7.3%	1,647	6.7%	-684	-1.9%	3,718	8.3%	-2,056	-2.4%
Poultry Meat	N/A	6	2.0%	-3	-2.2%	56	3.8%	41	7.6%
Seafood	2.1%	45	2.9%	-39	-3.4%	60	1.2%	-74	-4.4%
Arable Crops	3.6%	87	1.9%	0	0.0%	168	2.7%	21	0.7%
Produce	12.4%	384	11.9%	-492	-4.5%	7,165	25.5%	1,156	1.0%
Other Foods	N/A	54	4.5%	24	3.3%	219	4.7%	54	1.6%
Grapes	13.1%	141	10.3%	-51	-1.7%	491	10.2%	-331	-2.8%
<b>TOTAL</b>	<b>5.4%</b>	<b>2,451</b>	<b>4.8%</b>	<b>-1,296</b>	<b>-2.3%</b>	<b>12,284</b>	<b>9.1%</b>	<b>-1,080</b>	<b>-0.5%</b>

# 6. HAWKE'S BAY – PROCESSING

## PROCESSING QUANTITATIVE METRICS SCORECARD: HAWKE'S BAY

Various units as given; 2000-2018

	Units (2018)	Region has this % of all NZ units in this sector	18y ABS (00-18)	% of new unit growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average	Processing jobs (2018)	Region has this % all NZ processing jobs in this sector	18y ABS (00-18)	% of new NZ employment growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average
Dairy	6	2.8%	6	6%	N/A	↑	100	0.8%	100	2%	N/A	↑
Red Meat & Pork	30	9.1%	9	32%	2.0%	↑	2,715	10.2%	-445	-36%	-0.8%	↓
Poultry Meat	-	0.0%	0	0%	N/A	↑	-	0.0%	0	0%	N/A	↑
Seafood	12	3.7%	6	-	3.9%	↑	123	2.4%	45	-	2.6%	↑
Produce	51	11.0%	18	29%	2.4%	↑	1,890	20.7%	-410	-50%	-1.1%	↓
Grain-Based	7	1.9%	-3	-	-2.0%	↓	27	0.4%	-76	-	-7.2%	↓
Processed Foods	33	3.3%	20	4%	5.3%	↑	339	2.8%	283	6%	10.5%	↑
Wine	66	15.1%	33	13%	3.9%	↓	590	15.0%	280	17%	3.6%	↑
Other Beverages	21	5.6%	14	6%	6.3%	↑	118	3.2%	109	11%	15.4%	↑
<b>TOTAL</b>	226	6.4%	103	9%	3.4%	↑	5,902	7.0%	-114	-1%	-0.1%	↓

ABS = Absolute change; CAGR = Compound Annual Growth Rate; Source: Statistics NZ; DairyNZ; MAF/MPI; Coriolis analysis and estimates

## 7. TARANAKI – ON-FARM

### ON-FARM QUANTITATIVE METRICS SCORECARD: TARANAKI

Various units as given; 2000-2018

	Share of NZ area*	Units (2018)	% NZ units of this sector	Units 18y ABS (00-18)	Units 18y CAGR (00-18)	On-farm jobs (2018)	% NZ on-farm jobs in this sector	Employment 18y ABS (00-18)	Employment 18y CAGR (00-18)
<b>Dairy</b>	11.7%	2,088	14.0%	-1,512	-3.0%	4,338	10.7%	-1,112	-1.3%
<b>Red Meat &amp; Pork</b>	2.2%	1,056	4.3%	-105	-0.5%	1,521	3.4%	-139	-0.5%
<b>Poultry Meat</b>	N/A	51	17.0%	12	1.5%	311	21.1%	187	5.2%
<b>Seafood</b>	1.4%	15	1.0%	-12	-3.2%	21	0.4%	-31	-4.9%
<b>Arable Crops</b>	1.9%	144	3.2%	120	10.5%	219	3.5%	168	8.4%
<b>Produce</b>	0.7%	22	0.7%	-38	-5.4%	124	0.4%	-60	-2.2%
<b>Other Foods</b>	N/A	28	2.3%	10	2.5%	72	1.5%	48	6.3%
<b>Grapes</b>	0.0%	-	0.0%	-3	-100.0%	-	0.0%	-3	-100.0%
<b>TOTAL</b>	2.7%	3,404	6.6%	-1,528	-2.0%	6,606	4.9%	-942	-0.7%

# 7. TARANAKI – PROCESSING

## PROCESSING QUANTITATIVE METRICS SCORECARD: TARANAKI

Various units as given; 2000-2018

	Units (2018)	Region has this % of all NZ units in this sector	% of new unit 18y ABS growth in sector (00-18)	% of new unit 18y CAGR (00-18)	18y CAGR vs NZ average	Processing jobs (2018)	Region has this % all NZ processing jobs in this sector	% of new NZ employment 18y ABS growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average		
Dairy	6	2.8%	0	0%	0.0%	↓	1,800	13.9%	-100	-2%	-0.3%	↓
Red Meat & Pork	21	6.4%	11	39%	4.2%	↑	1,985	7.4%	315	26%	1.0%	↑
Poultry Meat	1	2.9%	-5	-	-9.5%	↓	670	18.4%	370	23%	4.6%	↑
Seafood	3	0.9%	-6	-	-5.9%	↓	15	0.3%	-40	-	-7.0%	↓
Produce	3	0.6%	-3	-5%	-3.8%	↓	30	0.3%	9	1%	2.0%	↑
Grain-Based	9	2.4%	0	0%	0.0%	↑	225	3.4%	-56	-	-1.2%	↓
Processed Foods	21	2.1%	14	3%	6.3%	↑	155	1.3%	83	2%	4.4%	↑
Wine	-	0.0%	-1	0%	-100.0%	↓	-	0.0%	-6	0%	-100.0%	↓
Other Beverages	9	2.4%	3	1%	2.3%	↓	9	0.2%	6	1%	6.3%	↑
<b>TOTAL</b>	<b>73</b>	<b>2.1%</b>	<b>13</b>	<b>1%</b>	<b>1.1%</b>	<b>↓</b>	<b>4,889</b>	<b>5.8%</b>	<b>581</b>	<b>4%</b>	<b>0.7%</b>	<b>↓</b>

ABS = Absolute change; CAGR = Compound Annual Growth Rate; Source: Statistics NZ; DairyNZ; MAF/MPI; Coriolis analysis and estimates

## 8. MANAWATU-WANGANUI – ON-FARM

### ON-FARM QUANTITATIVE METRICS SCORECARD: MANAWATU-WANGANUI

Various units as given; 2000-2018

	Share of NZ area*	Units (2018)	% NZ units of this sector	Units 18y ABS (00-18)	Units 18y CAGR (00-18)	On-farm jobs (2018)	% NZ on-farm jobs in this sector	Employment 18y ABS (00-18)	Employment 18y CAGR (00-18)
Dairy	4.9%	1,017	6.8%	-573	-2.5%	3,067	7.6%	177	0.3%
Red Meat & Pork	11.8%	3,030	12.4%	-1,389	-2.1%	6,080	13.6%	-2,044	-1.6%
Poultry Meat	N/A	12	4.0%	-21	-5.5%	47	3.2%	-36	-3.1%
Seafood	0.8%	15	1.0%	-3	-1.0%	27	0.5%	3	0.7%
Arable Crops	5.2%	213	4.7%	-12	-0.3%	383	6.2%	-12	-0.2%
Produce	10.8%	66	2.0%	-69	-3.9%	926	3.3%	-510	-2.4%
Other Foods	N/A	90	7.6%	54	5.2%	660	14.1%	446	6.5%
Grapes	0.0%	6	0.4%	0	0.0%	31	0.6%	25	9.6%
<b>TOTAL</b>	<b>8.4%</b>	<b>4,449</b>	<b>8.6%</b>	<b>-2,013</b>	<b>-2.1%</b>	<b>11,221</b>	<b>8.3%</b>	<b>-1,951</b>	<b>-0.9%</b>

## 8. MANAWATU-WANGANUI – PROCESSING

### PROCESSING QUANTITATIVE METRICS SCORECARD: MANAWATU-WANGANUI

Various units as given; 2000-2018

	Units (2018)	Region has this % of all NZ units in this sector	% of new unit 18y ABS growth in sector (00-18)	% of new unit 18y CAGR (00-18)	18y CAGR vs NZ average	Processing jobs (2018)	Region has this % all NZ processing jobs in this sector	% of new NZ employment 18y ABS growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average		
Dairy	12	5.6%	6	6%	3.9%	↓	800	6.2%	340	7%	3.1%	↑
Red Meat & Pork	33	10.1%	6	21%	1.1%	↑	3,170	11.9%	840	69%	1.7%	↑
Poultry Meat	3	8.6%	-3	-	-3.8%	↓	21	0.6%	3	0%	0.9%	↓
Seafood	6	1.8%	-1	-	-0.9%	↓	45	0.9%	-48	-	-4.0%	↓
Produce	21	4.5%	3	5%	0.9%	↑	280	3.1%	-80	-10%	-1.4%	↓
Grain-Based	14	3.8%	-16	-	-4.1%	↓	208	3.1%	-102	-	-2.2%	↓
Processed Foods	54	5.4%	30	6%	4.6%	↑	662	5.5%	359	8%	4.4%	↑
Wine	3	0.7%	3	1%	N/A	↑	3	0.1%	3	0%	N/A	↑
Other Beverages	9	2.4%	5	2%	4.6%	↓	18	0.5%	-21	-2%	-4.2%	↓
<b>TOTAL</b>	155	4.4%	33	3%	1.3%	↓	5,207	6.2%	1,294	10%	1.6%	↑

# 9. WELLINGTON – ON-FARM

## ON-FARM QUANTITATIVE METRICS SCORECARD: WELLINGTON

Various units as given; 2000-2018

	Share of NZ area*	Units (2018)	% NZ units of this sector	Units 18y ABS (00-18)	Units 18y CAGR (00-18)	On-farm jobs (2018)	% NZ on-farm jobs in this sector	Employment 18y ABS (00-18)	Employment 18y CAGR (00-18)
Dairy	4.2%	222	1.5%	-204	-3.6%	692	1.7%	-174	-1.2%
Red Meat & Pork	3.0%	948	3.9%	-450	-2.1%	1,830	4.1%	-643	-1.7%
Poultry Meat	N/A	3	1.0%	-9	-7.4%	9	0.6%	-28	-7.6%
Seafood	2.7%	99	6.4%	-18	-0.9%	172	3.4%	12	0.4%
Arable Crops	3.4%	63	1.4%	15	1.5%	114	1.8%	-59	-2.3%
Produce	1.4%	72	2.2%	-75	-3.9%	383	1.4%	-278	-3.0%
Other Foods	N/A	75	6.3%	51	6.5%	445	9.5%	378	11.1%
Grapes	2.7%	75	5.5%	0	0.0%	235	4.9%	-30	-0.7%
<b>TOTAL</b>	<b>3.0%</b>	<b>1,557</b>	<b>3.0%</b>	<b>-690</b>	<b>-2.0%</b>	<b>3,880</b>	<b>2.9%</b>	<b>-822</b>	<b>-1.1%</b>

ABS = Absolute change; CAGR = Compound Annual Growth Rate; \*Seafood uses share of coastline; poultry meat and other foods (eggs and honey) are not directly area dependent; Source: Statistics NZ; DairyNZ; MAF/MPI; MfE; Coriolis analysis and estimates



# 9. WELLINGTON – PROCESSING

## PROCESSING QUANTITATIVE METRICS SCORECARD: WELLINGTON

Various units as given; 2000-2018

	Units (2018)	Region has this % of all NZ units in this sector	% of new unit 18y ABS growth in sector (00-18)	% of new unit 18y CAGR (00-18)	18y CAGR vs NZ average	Processing jobs (2018)	Region has this % all NZ processing jobs in this sector	% of new NZ employment 18y ABS growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average		
Dairy	15	6.9%	9	8%	5.2%	↑	90	0.7%	-30	-1%	-1.6%	↓
Red Meat & Pork	15	4.6%	-9	-32%	-2.6%	↓	1,220	4.6%	250	20%	1.3%	↑
Poultry Meat	3	8.6%	2	-	6.3%	↑	25	0.7%	-85	-5%	-7.9%	↓
Seafood	24	7.4%	-6	-	-1.2%	↓	103	2.0%	-117	-	-4.1%	↓
Produce	21	4.5%	-3	-5%	-0.7%	↓	245	2.7%	110	13%	3.4%	↑
Grain-Based	28	7.6%	-11	-	-1.8%	↓	296	4.5%	-421	-	-4.8%	↓
Processed Foods	90	9.0%	45	9%	3.9%	↓	895	7.4%	434	10%	3.8%	↑
Wine	33	7.5%	21	8%	5.8%	↑	120	3.0%	40	2%	2.3%	↓
Other Beverages	48	12.9%	39	17%	9.7%	↑	254	6.9%	216	22%	11.1%	↑
<b>TOTAL</b>	<b>277</b>	<b>7.8%</b>	<b>87</b>	<b>8%</b>	<b>2.1%</b>	<b>↓</b>	<b>3,248</b>	<b>3.9%</b>	<b>397</b>	<b>3%</b>	<b>0.7%</b>	<b>↓</b>

ABS = Absolute change; CAGR = Compound Annual Growth Rate; Source: Statistics NZ; DairyNZ; MAF/MPI; Coriolis analysis and estimates

# 10. NELSON/TASMAN – ON-FARM

## ON-FARM QUANTITATIVE METRICS SCORECARD: NELSON/TASMAN

Various units as given; 2000-2018

	Share of NZ area*	Units (2018)	% NZ units of this sector	Units 18y ABS (00-18)	Units 18y CAGR (00-18)	On-farm jobs (2018)	% NZ on-farm jobs in this sector	Employment 18y ABS (00-18)	Employment 18y CAGR (00-18)
<b>Dairy</b>	1.4%	174	1.2%	-105	-2.6%	505	1.2%	-83	-0.8%
<b>Red Meat &amp; Pork</b>	1.0%	609	2.5%	-231	-1.8%	945	2.1%	-380	-1.9%
<b>Poultry Meat</b>	N/A	-	0.0%	-18	-100.0%	-	0.0%	-18	-100.0%
<b>Seafood</b>	4.4%	153	10.0%	-114	-3.0%	1,398	27.8%	-10	-0.0%
<b>Arable Crops</b>	1.1%	75	1.7%	39	4.2%	254	4.1%	134	4.3%
<b>Produce</b>	5.7%	213	6.6%	-285	-4.6%	3,240	11.5%	-1,578	-2.2%
<b>Other Foods</b>	N/A	57	4.8%	33	4.9%	266	5.7%	184	6.8%
<b>Grapes</b>	3.1%	60	4.4%	24	2.9%	243	5.0%	159	6.1%
<b>TOTAL</b>	3.8%	1,341	2.6%	-657	-2.2%	6,851	5.1%	-1,592	-1.2%

# 10. NELSON/TASMAN – PROCESSING

## PROCESSING QUANTITATIVE METRICS SCORECARD: NELSON/TASMAN

Various units as given; 2000-2018

	Units (2018)	Region has this % of all NZ units in this sector	% of new unit 18y ABS growth in sector (00-18)	% of new unit 18y CAGR (00-18)	18y CAGR vs NZ average	Processing jobs (2018)	Region has this % all NZ processing jobs in this sector	% of new NZ employment 18y ABS growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average		
Dairy	12	5.6%	6	6%	3.9%	↓	126	1.0%	-64	-1%	-2.3%	↓
Red Meat & Pork	6	1.8%	-3	-11%	-2.2%	↓	276	1.0%	-57	-5%	-1.0%	↓
Poultry Meat	-	0.0%	-3	-	-100.0%	↓	-	0.0%	-3	0%	-100.0%	↓
Seafood	18	5.5%	-9	-	-2.2%	↓	998	19.6%	-1,062	-	-3.9%	↓
Produce	30	6.5%	3	5%	0.6%	↓	473	5.2%	93	11%	1.2%	↑
Grain-Based	10	2.7%	0	0%	0.0%	↑	48	0.7%	-8	-	-0.9%	↓
Processed Foods	33	3.3%	20	4%	5.3%	↑	222	1.8%	177	4%	9.3%	↑
Wine	24	5.5%	12	5%	3.9%	↓	140	3.6%	45	3%	2.2%	↓
Other Beverages	18	4.8%	9	4%	3.9%	↓	180	4.9%	106	11%	5.1%	↑
<b>TOTAL</b>	151	4.3%	35	3%	1.5%	↓	2,463	2.9%	-773	-6%	-1.5%	↓

# 11. MARLBOROUGH – ON-FARM

## ON-FARM QUANTITATIVE METRICS SCORECARD: MARLBOROUGH

Various units as given; 2000-2018

	Share of NZ area*	Units (2018)	% NZ units of this sector	Units 18y ABS (00-18)	Units 18y CAGR (00-18)	On-farm jobs (2018)	% NZ on-farm jobs in this sector	Employment 18y ABS (00-18)	Employment 18y CAGR (00-18)
Dairy	0.4%	66	0.4%	-42	-2.7%	146	0.4%	-62	-1.9%
Red Meat & Pork	4.1%	408	1.7%	-309	-3.1%	754	1.7%	-367	-2.2%
Poultry Meat	N/A	-	0.0%	-6	-100.0%	-	0.0%	-6	-100.0%
Seafood	9.9%	171	11.1%	-30	-0.9%	506	10.1%	25	0.3%
Arable Crops	0.6%	45	1.0%	-12	-1.3%	66	1.1%	-18	-1.3%
Produce	2.3%	42	1.3%	-150	-8.1%	158	0.6%	-763	-9.3%
Other Foods	N/A	24	2.0%	9	2.6%	80	1.7%	47	5.0%
Grapes	66.9%	669	48.9%	405	5.3%	1,919	39.7%	1,085	4.7%
<b>TOTAL</b>	<b>4.0%</b>	<b>1,425</b>	<b>2.8%</b>	<b>-135</b>	<b>-0.5%</b>	<b>3,629</b>	<b>2.7%</b>	<b>-59</b>	<b>-0.1%</b>

# 11. MARLBOROUGH – PROCESSING

## PROCESSING QUANTITATIVE METRICS SCORECARD: MARLBOROUGH

Various units as given; 2000-2018

	Units (2018)	Region has this % of all NZ units in this sector	% of new unit 18y ABS growth in sector (00-18)	% of new unit 18y CAGR (00-18)	18y CAGR vs NZ average	Processing jobs (2018)	Region has this % all NZ processing jobs in this sector	% of new NZ employment 18y ABS growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average		
Dairy	3	1.4%	0	0%	0.0%	↓	9	0.1%	-61	-1%	-10.8%	↓
Red Meat & Pork	6	1.8%	3	11%	3.9%	↑	190	0.7%	-220	-18%	-4.2%	↓
Poultry Meat	-	0.0%	0	0%	N/A	↑	-	0.0%	0	0%	N/A	↑
Seafood	12	3.7%	0	0%	0.0%	↑	453	8.9%	-17	-	-0.2%	↑
Produce	12	2.6%	0	0%	0.0%	↓	373	4.1%	-72	-9%	-1.0%	↓
Grain-Based	9	2.4%	4	-	3.3%	↑	24	0.4%	-15	-	-2.7%	↓
Processed Foods	22	2.2%	14	3%	5.8%	↑	141	1.2%	83	2%	5.1%	↑
Wine	105	24.0%	66	26%	5.7%	↑	1,300	33.0%	700	44%	4.4%	↑
Other Beverages	4	1.1%	0	0%	0.0%	↓	47	1.3%	7	1%	0.9%	↓
<b>TOTAL</b>	<b>173</b>	<b>4.9%</b>	<b>87</b>	<b>8%</b>	<b>4.0%</b>	<b>↑</b>	<b>2,537</b>	<b>3.0%</b>	<b>405</b>	<b>3%</b>	<b>1.0%</b>	<b>↓</b>

ABS = Absolute change; CAGR = Compound Annual Growth Rate; Source: Statistics NZ; DairyNZ; MAF/MPI; Coriolis analysis and estimates

## 12. WEST COAST – ON-FARM

### ON-FARM QUANTITATIVE METRICS SCORECARD: WEST COAST

Various units as given; 2000-2018

	Share of NZ area*	Units (2018)	% NZ units of this sector	Units 18y ABS (00-18)	Units 18y CAGR (00-18)	On-farm jobs (2018)	% NZ on-farm jobs in this sector	Employment 18y ABS (00-18)	Employment 18y CAGR (00-18)
<b>Dairy</b>	4.1%	384	2.6%	-60	-0.8%	1,154	2.8%	330	1.9%
<b>Red Meat &amp; Pork</b>	0.9%	243	1.0%	-144	-2.6%	356	0.8%	-165	-2.1%
<b>Poultry Meat</b>	N/A	-	0.0%	-3	-100.0%	-	0.0%	-6	-100.0%
<b>Seafood</b>	3.6%	30	2.0%	-51	-5.4%	51	1.0%	-70	-4.7%
<b>Arable Crops</b>	1.0%	24	0.5%	18	8.0%	33	0.5%	27	9.9%
<b>Produce</b>	0.1%	9	0.3%	9	N/A	55	0.2%	25	3.4%
<b>Other Foods</b>	N/A	21	1.8%	12	4.8%	46	1.0%	28	5.4%
<b>Grapes</b>	0.0%	3	0.2%	3	N/A	6	0.1%	6	N/A
<b>TOTAL</b>	8.8%	714	1.4%	-216	-1.5%	1,701	1.3%	175	0.6%

# 12. WEST COAST – PROCESSING

## PROCESSING QUANTITATIVE METRICS SCORECARD: WEST COAST

Various units as given; 2000-2018

	Units (2018)	Region has this % of all NZ units in this sector	% of new unit 18y ABS growth in sector (00-18)	% of new unit 18y CAGR (00-18)	18y CAGR vs NZ average	Processing jobs (2018)	Region has this % all NZ processing jobs in this sector	% of new NZ employment 18y ABS growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average		
Dairy	3	1.4%	0	0%	0.0%	↓	510	3.9%	360	8%	7.0%	↑
Red Meat & Pork	9	2.7%	5	18%	4.6%	↑	312	1.2%	99	8%	2.1%	↑
Poultry Meat	-	0.0%	0	0%	N/A	↑	-	0.0%	0	0%	N/A	↑
Seafood	6	1.8%	-6	-	-3.8%	↓	203	4.0%	70	-	2.4%	↑
Produce	3	0.6%	-3	-5%	-3.8%	↓	3	0.0%	-12	-1%	-8.6%	↓
Grain-Based	-	0.0%	-3	-	-100.0%	↓	-	0.0%	-3	-	-100.0%	↓
Processed Foods	9	0.9%	9	2%	N/A	↑	9	0.1%	9	0%	N/A	↑
Wine	-	0.0%	0	0%	N/A	↑	-	0.0%	0	0%	N/A	↑
Other Beverages	6	1.6%	3	1%	3.9%	↓	12	0.3%	-13	-1%	-4.0%	↓
<b>TOTAL</b>	<b>36</b>	<b>1.0%</b>	<b>5</b>	<b>0%</b>	<b>0.8%</b>	<b>↓</b>	<b>1,049</b>	<b>1.3%</b>	<b>510</b>	<b>4%</b>	<b>3.8%</b>	<b>↑</b>

ABS = Absolute change; CAGR = Compound Annual Growth Rate; Source: Statistics NZ; DairyNZ; MAF/MPI; Coriolis analysis and estimates

# 13. CANTERBURY – ON-FARM

## ON-FARM QUANTITATIVE METRICS SCORECARD: CANTERBURY

Various units as given; 2000-2018

	Share of NZ area*	Units (2018)	% NZ units of this sector	Units 18y ABS (00-18)	Units 18y CAGR (00-18)	On-farm jobs (2018)	% NZ on-farm jobs in this sector	Employment 18y ABS (00-18)	Employment 18y CAGR (00-18)
<b>Dairy</b>	11.3%	1,665	11.2%	690	3.0%	6,765	16.7%	4,390	6.0%
<b>Red Meat &amp; Pork</b>	20.9%	3,895	15.9%	-2,006	-2.3%	6,615	14.8%	-3,066	-2.1%
<b>Poultry Meat</b>	N/A	63	21.0%	-48	-3.1%	203	13.7%	-38	-0.9%
<b>Seafood</b>	4.5%	174	11.3%	-75	-2.0%	1,054	21.0%	600	4.8%
<b>Arable Crops</b>	48.2%	1,275	28.4%	-75	-0.3%	2,485	40.2%	-115	-0.3%
<b>Produce</b>	21.6%	228	7.1%	-252	-4.1%	1,978	7.0%	-750	-1.8%
<b>Other Foods</b>	N/A	138	11.6%	36	1.7%	438	9.4%	186	3.1%
<b>Grapes</b>	3.8%	108	7.9%	21	1.2%	288	6.0%	21	0.4%
<b>TOTAL</b>	16.9%	7,546	14.7%	-1,709	-1.1%	19,826	14.6%	1,228	0.4%



# 13. CANTERBURY – PROCESSING

## PROCESSING QUANTITATIVE METRICS SCORECARD: CANTERBURY

Various units as given; 2000-2018

	Units (2018)	Region has this % of all NZ units in this sector	18y ABS (00-18)	% of new unit growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average	Processing jobs (2018)	Region has this % all NZ processing jobs in this sector	18y ABS (00-18)	% of new NZ employment growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average
Dairy	24	11.1%	9	8%	2.6%	↓	2,350	18.1%	1,460	31%	5.5%	↑
Red Meat & Pork	48	14.6%	6	21%	0.7%	↑	4,420	16.5%	300	25%	0.4%	↑
Poultry Meat	6	17.1%	-3	-	-2.2%	↓	760	20.9%	290	18%	2.7%	↓
Seafood	42	12.9%	0	0%	0.0%	↑	1,010	19.8%	-485	-	-2.2%	↓
Produce	48	10.3%	15	24%	2.1%	↑	1,450	15.9%	-30	-4%	-0.1%	↓
Grain-Based	67	18.1%	-11	-	-0.8%	↓	1,750	26.3%	245	-	0.8%	↑
Processed Foods	138	13.8%	41	8%	2.0%	↓	815	6.8%	25	1%	0.2%	↓
Wine	48	11.0%	30	12%	5.6%	↑	250	6.4%	140	9%	4.7%	↑
Other Beverages	48	12.9%	26	11%	4.4%	↓	415	11.3%	-60	-6%	-0.7%	↓
<b>TOTAL</b>	<b>469</b>	<b>13.2%</b>	<b>113</b>	<b>10%</b>	<b>1.5%</b>	<b>↓</b>	<b>13,220</b>	<b>15.8%</b>	<b>1,885</b>	<b>14%</b>	<b>0.9%</b>	<b>↓</b>

# 14. OTAGO – ON-FARM

## ON-FARM QUANTITATIVE METRICS SCORECARD: OTAGO

Various units as given; 2000-2018

	Share of NZ area*	Units (2018)	% NZ units of this sector	Units 18y ABS (00-18)	Units 18y CAGR (00-18)	On-farm jobs (2018)	% NZ on-farm jobs in this sector	Employment 18y ABS (00-18)	Employment 18y CAGR (00-18)
<b>Dairy</b>	4.1%	600	4.0%	153	1.6%	2,100	5.2%	1,113	4.3%
<b>Red Meat &amp; Pork</b>	19.5%	2,031	8.3%	-936	-2.1%	4,388	9.8%	-1,159	-1.3%
<b>Poultry Meat</b>	N/A	6	2.0%	-24	-8.6%	12	0.8%	-21	-5.5%
<b>Seafood</b>	3.1%	87	5.7%	-15	-0.9%	168	3.3%	48	1.9%
<b>Arable Crops</b>	9.7%	258	5.7%	138	4.3%	429	6.9%	165	2.7%
<b>Produce</b>	4.1%	177	5.5%	-36	-1.0%	2,127	7.6%	117	0.3%
<b>Other Foods</b>	N/A	57	4.8%	9	1.0%	307	6.6%	217	7.1%
<b>Grapes</b>	5.2%	132	9.6%	51	2.8%	692	14.3%	361	4.2%
<b>TOTAL</b>	11.8%	3,348	6.5%	-660	-1.0%	10,223	7.5%	841	0.5%

# 14. OTAGO – PROCESSING

## PROCESSING QUANTITATIVE METRICS SCORECARD: OTAGO

Various units as given; 2000-2018

	Units (2018)	Region has this % of all NZ units in this sector	% of new unit 18y ABS (00-18)	% of new unit growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average	Processing jobs (2018)	Region has this % all NZ processing jobs in this sector	% of new NZ employment 18y ABS (00-18)	% of new NZ employment growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average
Dairy	9	4.2%	3	3%	2.3%	↓	270	2.1%	0	0%	0.0%	↓
Red Meat & Pork	15	4.6%	-3	-11%	-1.0%	↓	3,062	11.5%	-318	-26%	-0.5%	↓
Poultry Meat	1	2.9%	-2	-	-5.9%	↓	9	0.2%	-31	-2%	-8.0%	↓
Seafood	7	2.1%	-5	-	-3.0%	↓	100	2.0%	-242	-	-6.6%	↓
Produce	24	5.2%	3	5%	0.7%	↓	162	1.8%	-228	-28%	-4.8%	↓
Grain-Based	24	6.5%	3	-	0.7%	↑	280	4.2%	27	-	0.6%	↑
Processed Foods	48	4.8%	22	4%	3.5%	↓	654	5.4%	81	2%	0.7%	↓
Wine	51	11.6%	39	16%	8.4%	↑	260	6.6%	215	13%	10.2%	↑
Other Beverages	34	9.1%	25	11%	7.7%	↑	138	3.8%	86	9%	5.6%	↑
<b>TOTAL</b>	<b>213</b>	<b>6.0%</b>	<b>85</b>	<b>7%</b>	<b>2.9%</b>	<b>↑</b>	<b>4,935</b>	<b>5.9%</b>	<b>-410</b>	<b>-3%</b>	<b>-0.4%</b>	<b>↓</b>

ABS = Absolute change; CAGR = Compound Annual Growth Rate; Source: Statistics NZ; DairyNZ; MAF/MPI; Coriolis analysis and estimates

# 15. SOUTHLAND – ON-FARM

## ON-FARM QUANTITATIVE METRICS SCORECARD: SOUTHLAND

Various units as given; 2000-2018

	Share of NZ area*	Units (2018)	% NZ units of this sector	Units 18y ABS (00-18)	Units 18y CAGR (00-18)	On-farm jobs (2018)	% NZ on-farm jobs in this sector	Employment 18y ABS (00-18)	Employment 18y CAGR (00-18)
Dairy	9.1%	1,215	8.2%	471	2.8%	3,965	9.8%	2,441	5.5%
Red Meat & Pork	9.2%	1,965	8.0%	-1,773	-3.5%	4,101	9.2%	-3,242	-3.2%
Poultry Meat	N/A	-	0.0%	-21	-100.0%	-	0.0%	-24	-100.0%
Seafood	20.3%	159	10.4%	-21	-0.7%	344	6.8%	-11	-0.2%
Arable Crops	11.5%	267	5.9%	141	4.3%	537	8.7%	293	4.5%
Produce	1.0%	15	0.5%	-3	-1.0%	154	0.5%	28	1.1%
Other Foods	N/A	18	1.5%	-6	-1.6%	54	1.2%	-10	-0.9%
Grapes	0.0%	3	0.2%	3	N/A	3	0.1%	3	N/A
<b>TOTAL</b>	<b>11.8%</b>	<b>3,642</b>	<b>7.1%</b>	<b>-1,209</b>	<b>-1.6%</b>	<b>9,158</b>	<b>6.8%</b>	<b>-522</b>	<b>-0.3%</b>

ABS = Absolute change; CAGR = Compound Annual Growth Rate; \*Seafood uses share of coastline; poultry meat and other foods (eggs and honey) are not directly area dependent; Source: Statistics NZ; DairyNZ; MAF/MPI; MfE; Coriolis analysis and estimates

# 15. SOUTHLAND – PROCESSING

## PROCESSING QUANTITATIVE METRICS SCORECARD: SOUTHLAND

Various units as given; 2000-2018

	Units (2018)	Region has this % of all NZ units in this sector	% of new unit 18y ABS (00-18)	% of new unit growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average	Processing jobs (2018)	Region has this % all NZ processing jobs in this sector	18y ABS (00-18)	% of new NZ employment growth in sector (00-18)	18y CAGR (00-18)	18y CAGR vs NZ average
Dairy	6	2.8%	3	3%	3.9%	↓	630	4.9%	210	4%	2.3%	↓
Red Meat & Pork	24	7.3%	6	21%	1.6%	↑	3,600	13.5%	-300	-25%	-0.4%	↓
Poultry Meat	-	0.0%	-3	-	-100.0%	↓	-	0.0%	-85	-5%	-100.0%	↓
Seafood	27	8.3%	0	0%	0.0%	↑	255	5.0%	-115	-	-2.0%	↓
Produce	6	1.3%	-1	-2%	-0.9%	↓	37	0.4%	-18	-2%	-2.2%	↓
Grain-Based	7	1.9%	-4	-	-2.5%	↓	57	0.9%	-97	-	-5.4%	↓
Processed Foods	16	1.6%	4	1%	1.6%	↓	155	1.3%	-8	0%	-0.3%	↓
Wine	3	0.7%	3	1%	N/A	↑	3	0.1%	3	0%	N/A	↑
Other Beverages	1	0.3%	1	0%	N/A	↑	12	0.3%	12	1%	N/A	↑
<b>TOTAL</b>	<b>90</b>	<b>2.5%</b>	<b>9</b>	<b>1%</b>	<b>0.6%</b>	<b>↓</b>	<b>4,749</b>	<b>5.7%</b>	<b>-398</b>	<b>-3%</b>	<b>-0.4%</b>	<b>↓</b>

ABS = Absolute change; CAGR = Compound Annual Growth Rate; Source: Statistics NZ; DairyNZ; MAF/MPI; Coriolis analysis and estimates

# A3. ABBREVIATIONS

ABS	Absolute change	kg	Kilogram
ANZSIC	AU/NZ Standard Industry Classification	L	Litre
AU	Australia	m/ml	Million
Australasia	Australia and New Zealand	MFtE	Ministry for the Environment
b	Billion	MPI	Ministry of Primary Industries
CAGR	Compound Annual Growth Rate	mT/MT	Metric Tonne
F&B	Food and Beverage	n/a	Not available/not applicable
F&V	Fruit and Vegetables	Nec/nes/nei	Not elsewhere classified/specified/indicated
FAO	Food and Agriculture Organisation of the United Nations	N/C	Not calculable
FOB	Free on Board	NZ	New Zealand
f	Forecast	NZD/NZ\$	New Zealand Dollar
GEO	Geographic (unit)	T	Tonne
Ha	Hectare	US/USA	United States of America
HS Code	Harmonized Commodity Description and Coding System	US\$/USD	United States dollar
JV	Joint venture	Y	Year



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